REPORT RESUMES

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SCHOOL REVENUE SYSTEMS IN FIVE STATES.
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STATE-ADMINISTERED, EDUCATIONAL REVENUE SYSTEMS WERE COMPARED IN FIVE STATES TO SYSTEMS IN THE SAME STATES WHICH RELY GREATLY UPON LOCAL DISTRICT PROPERTY TAXES AND VOLUNTARY CONTRIBUTIONS FOR EDUCATIONAL EXPENSES. A PILOT SURVEY COVERED THE STATES OF CALIFORNIA, NEBRASKA, NEW JERSEY, WASHINGTON, AND WISCONSIN, AND WAS DESIGNED TO DETERMINE THE EFFECTIVENESS OF THEIR STATE AND LOCAL EDUCATIONAL FINANCE SYSTEMS IN MEETING THE FISCAL GOALS OF EQUALITY AND EXCELLENCE. THE FIRST PHASE OF THE PROJECT WAS CONCERNED WITH PROCESSES AND MECHANISMS FOR ALLOCATING RESOURCES TO LOCAL UNITS WITHIN THE INSTITUTION OF A STATE SCHOOL SYSTEM, REFERENCING PARTICULARLY THE CONDITIONS OF EQUITY IN ALLOCATION PROCEDURES. SECONDLY, SOME EXPLORATORY EFFORTS WERE DIRECTED TO--(1) THE RELATIONSHIP OF EDUCATIONAL EXPENDITURES IN ONE TIME PERIOD TO NATIONAL PRODUCTIVITY IN A SUBSEQUENT PERIOD, (2) THE EFFECT OF HIGH LEVELS OF ENROLLMENT IN NON-TAX-SUPPORTED SCHOOLS ON THE AVAILABILITY OF RESOURCES FOR PUBLIC SCHOOL SUPPORT, (3) THE EFFECT OF FISCAL DEPENDENCE OR INDEPENDENCE ON PUBLIC SCHOOL SUPPORT, AND (4) THE RELATIONSHIP BETWEEN THE WEALTH OF A DISTRICT AND THE WAY IN WHICH EXPENDITURES ARE DISTRIBUTED AMONG BUDGET LINE ITEMS. OVERALL, ABOUT 320 SEPARATE SCHOOL DISTRICTS WERE STUDIED. THE FINDINGS OF THIS STUDY WERE INCONCLUSIVE, AS ANALYTICAL CROSS-CORRELATIONS MADE FROM THE SURVEY RESULTS REVEALED VARIABLES IN ALMOST EVERY AREA OF EXPLORATION WHICH WARRANTED FURTHER RESEARCH. (JH)

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SCHOOL REVENUE SYSTEMS IN FIVE STATES

by

H. Thomas James

Report of a Pilot Study

School of Education
Stanford University
Stanford, California

March 31, 1961

Cooperative Research Project No. 803
H. Thomas James, Director
J. Alan Thomas and Harold J. Dyck, Research Associates

The research reported herein was performed pursuant to a contract with the United States Office of Education, Department of Health, Education and Welfare.

PREFACE

This study marks a way station in the author's quest for understanding of the processes through which resources are allocated to the support of public education. It is the continuation of a search (which began when I thought I was performing effectively as a part of the process) for a way to move from dependence on principles, which guide action, to concepts, which increase understanding.

In the fifteen months which have been devoted to this study, many people have contributed to my understanding.

Most important of all have been the contributions of my colleagues in the study, Harold J. Dyck and J. Alan Thomas, research associates and advanced graduate students at Stanford, who have made important substantive contributions to the study. They have made their work on the project an integral part of their preparation for the Ph.D. degree.

In addition to the financial assistance provided by the Cooperative Research Branch, many members of the United States Office of Education provided valuable encouragement, support, and assistance. I am particularly grateful for the continued interest of Roy M. Hall, Assistant Commissioner of Education for Research; David L. Clark, Director, Cooperative Research Branch, who provided helpful insights that grew out of his own research contributions to school finance; and

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I wish to acknowledge a special debt of gratitude to the members of the National Advisory Committee, which met on the Stanford campus in the early days of the study. They have been most generous with suggestions and comments, both in the original formulation and in the final stages of the report. The committee members were Arvid J. Burke, Director of Studies, New York Teachers' Association, Wallace W. Hall, Deputy Superintendent of Public Instruction, California; R. L. Johns, Head, Educational Administration, University of Florida; Erick L. Lindman, Professor of Education, University of California, Los Angeles; Edgar L. Morphet, Professor of Education, University of California, Berkeley; George D. Strayer, Jr., Professor of Educational Administration, University of Washington; and G. W. Watson, State Superintendent of Public Instruction, Wisconsin.

I am grateful for the supportive interest of the Chief State School Officers from the states involved in the study: Mr. Watson, who was on the Advisory Committee; Roy E. Simpson of California; Freeman B. Decker of Nebraska; Frederick M. Raubinger of New Jersey; Lloyd J. Andrews and his successor, Louis Bruno, of Washington; and for the unfailing courtesy and cooperation expressed both by these executives and their professional and clerical staffs. Edgar Fuller, Executive Secretary of the Council of Chief State School Officers, also provided continuing encouragement and support.

Paul R. Mort, Professor Emeritus, Teachers College, Columbia University, gave generously of his time on several occasions when I requested an interview. Professor Mort also read the rough draft of the final report and made a number of helpful suggestions.

Four economists made important contributions to my thinking about the problems of school finance in relation to the field of public finance. Jesse Burkhead, Professor of Economics, Syracuse University; Werner Z. Hirsch, Professor of Economics, Washington University; and Edward F. Renshaw, Department of Agricultural Economics, University of California, Berkeley, shared materials developing out of their own research, and made valued suggestions for improvement of this manuscript. Walter W. McMahon, Assistant Professor of Economics, University of Illinois, gave generously of his time as consultant during a summer at Stanford, and shared ideas from his research in the field of educational finance.

I wish to express gratitude for the advice and assistance provided by faculty members of Stanford University. Lorie Tarshis, Executive Head of the Department of Economics, provided thoughtful counsel whenever it was requested, and Hendrick S. Houthakker was particularly helpful to the development of Edward H. Loveless' related study. Robert Wert, Vice Provost, gave generously of his interest and support, and provided valuable comments on the quarterly report. I. James Quillen, Dean of the School of Education, and William R. Odell, Chairman of the Committee on Educational Administration and Professor of Education, were consistently supportive and helpful in freeing the author's time for the study. Arthur P. Coladarci and Lawrence G. Thomas, Professors of Education, contributed methodological suggestions to the development of the initial proposal for the study. Richard F. Carter, Director, Institute for Communication Research, made valuable suggestions regarding methodology, content, and preparation of the manuscript.

A number of students in my school finance classes have contributed toward the research involved in this project. While space limitations preclude mention of all those who made contributions, two studies were of special relevance. Robert Henning made a study of the definition of Average Daily Attendance in the five states. George and Glorianne Rice examined the internal expenditures of some elementary school districts, with emphasis on the elasticity and flexibility of a number of budget line items.

I wish to pay special tribute to my long-time counsellor and friend, John Guy Fowlkes, Professor of Education, University of Wisconsin, who first called my attention to the field of school finance. By means of his discussions both in my preparation for this study and during its progress, Dean Fowlkes has made a unique contribution to this report.

Finally, I wish to thank Katheryne Penfield, who served so faithfully as my secretary during the course of this study.

H. Thomas James
Director

TABLE OF CONTENTS

		Page
Preface		i
List of Tables and Figures		vi
Introduction and Summary		1
Chapter One:	The Study of School Finance in the Historical Context	16
Chapter Two:	The Tests for Equality and Initiative	29
Chapter Three:	Exploratory Study of Concomitant Variables Affecting Expenditures for Education	47
References		
Appendix A:	Basic Data and Discussion of Development of Information Items	82
Appendix B:	Data-Gathering Instruments	
	Exhibit A California Tax Roll Questionnaire	124
	Exhibit B Washington Tax Roll Questionnaire	125
	Exhibit C California District Questionnaire	126
	Exhibit D Washington District Questionnaire	127
Appendix C:	Some Further Notes on the Five Systems of School Support	128
Appendix D:	Some Notes on the Total Allocation for State and Local Government Services	137

TABLES

Page

Text Tables

Table 1 State revenue per pupil at selected intervals 31

Table 2 Selected states and state revenue per pupil 33

Table 3 Levy rates for current expense 35

Table 4 Current expense per pupil 40

Table 5 Full valuation per pupil 42

Table 6 Voluntary rates 43

Table 7 Voluntary expenditures per resident ADA 44

Table 8 Expenditures and rates, fiscally dependent and independent districts 59

Table 9 Expenditures and rates, paired New Jersey districts 61

Table 10 Expenditures and rates, paired Wisconsin districts 62

Table 11 Correlations in New Jersey and Wisconsin paired districts 64

Table 12 Valuations, expenditures and rates of classified cities 66

Table 13 Flexibility of expenditures 69

Figures

Figure 1 Valuation and state aid in five states 49-51

Figure 2 Levels of district expenditures in five states 52

Figure 3 Personal income and expenditures for education in California, 1930-1958 74

Figure 4 Personal income and expenditures for education in five states, 1930-1958 75

Appendix Tables

Page

Table A-1 Equalized valuations, Wisconsin districts 88

Table A-2 Equalized valuations, Nebraska districts 89

Table A-3 Equalized valuations, California districts 91-2

Table A-4 Equalized valuations, Washington districts 93-5

Table A-5 Assessment ratios in five states 98

Table A-6 Current expense per pupil, California districts 102

Table A-7 Current expense per pupil, Washington districts 103

Table A-8 ADA, New Jersey districts 105-7

Table A-9 Net current expense, required rates and voluntary expenditures, Wisconsin districts 111

Table A-10 Net current expense, required rates, mandated rates, and voluntary expenditures, California districts 114-15

Table A-11 Net current expense, required rates, mandated rates and voluntary expenditures, Washington districts 117-19

Table A-12 Net current expense, required rates, and voluntary expenditures, New Jersey districts 120-22

Table A-13 Net current expense, required rates, mandated rates and voluntary expenditures, Nebraska districts 123

Table A-14 Non-federal revenue, governmental source 129

Table A-15 Percent of non-federal revenue by locus of decision 131

Table A-16 Estimated allocations by state and local levels 132

Table A-17 Percent of state funds by type of grant 134

Appendix Tables (continued) **Page**

Table A-18 State funds per pupil by type of grant 134

Table A-19 Variations in state funds per pupil 135

Table A-20 Estimated allocations per pupil by state and local levels 136

Table A-21 Revenue per capita and per $1,000 of personal income 138

Table A-22 Taxes as percent of wealth, income and consumption 139

Table A-23 Percent of revenue by tax source 140

Table A-24 Taxes as a percent of base 141

INTRODUCTION AND SUMMARY

A society creates institutions to accomplish purposes that are beyond individual accomplishment, or that an individual cannot accomplish efficiently. The purposes an institution is created to accomplish are defined by the expectations of the society. These expectations may be explicit, as in written laws; or they may be implicit, so pervasive in the society that no one feels the need to write them down.

A society's expectations are shaped by its values. A society homogeneous in its values has less ambiguous sets of expectations for its institutions. A society heterogeneous in its values, however, may have conflicting sets of expectations. A homogeneous society with a body of common values may then be characterized by stability in its institutional arrangements. A heterogeneous society may be characterized by increasing stability in its institutions if the body of common values grows.

The public school is an institution created by our society to transmit its values and culture to succeeding generations. It was originally defined by expectations shaped from the common values of a small and relatively homogeneous society, values diffused so generally that the expectations are rarely expressed more fully than in the typical constitutional mandate to legislative bodies:

> Knowledge and morality being necessary to good government, schools and the means of education shall be encouraged.

The terms "knowledge," "morality," and "good government" need no definition in a society with homogeneous values.

The legislative bodies have complied with the mandates. Schools as means of education have been encouraged. The structural elements of the institution have been made explicit; in fact, they have been endlessly elaborated in statutes governing organization, allocation of resources, and definition of roles. But the expectations that define the purpose of the school remain implicit, although cleavages are evident along lines of social differentiation and stratification,[1] and perhaps as a consequence of increasing professionalization in the sub-culture of the school. The resulting symptoms of institutional malfunction can be seen in the past 15 years in increasing conflicts over school policy, particularly in districts containing communities with diverse social ranks, family status, and ethnic groups, in the increasing diversity among communities homogeneous within themselves, and in the increases in alternative institutional arrangements for education.

Public schools in our society are tax-supported institutions. All but negligible portions of their revenues are allocated through the voting mechanism, either at the state or at the local level. Three conditions are therefore essential to public school support. The first is that the expectations for service from the institution be sufficiently pervasive within a voting unit to receive majority support. The second is a system of voting that allows the voters to express preferences on the alternatives for allocating available resources between the public and the private sectors of the economy, among competing institutional components of the public sector, and among alternative services within the educational institution. The third condition is, of course, availability of resources.

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[1] See Eshrif Shevky and Wendell Bell, Social Area Analysis, (Stanford: 1955) for discussion of a typology to account for observed social differentiation between urban subpopulations.

The core of expectations with respect to educational services that could muster majority support in our society is probably reasonably large.[2] About 63 percent of our population in 1960 resided in 215 standard metropolitan areas. Although differences unquestionably exist among these units (in what might be called the mean educational offering) an observer might expect to find greater differences in the quantity and quality of educational services offered within any one of the larger metropolitan units. Most parents who have been reasonably satisfied with the education provided for their children in a given community in the New York metropolitan area, for instance, will experience little difficulty in finding similar satisfaction in the educational services provided in a similar community in the metropolitan areas of Los Angeles, Chicago, Philadelphia, Detroit, San Francisco, Boston, Pittsburg, St. Louis, and Washington, D. C., or in many other metropolitan areas of the nation, although within any one of these areas, a parent will find considerable variation.

In our system of fiscal federalism, however, the size of this core of expectations has not been fully tested by the voting mechanism.

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[2] Carter suggests that while our society may be growing more heterogeneous in its merit wants, the trend probably is toward greater homogeneity in social wants. See Richard F. Carter, Voters and Their Schools (Stanford: 1960) for similarity in responses to general questions on educational preferences in three cities.

Voting on preferences for educational services provided by government is multi-level. At the federal level the congress has determined from time to time that certain services are to be supported by federal funds; thus, it has supported a system of higher education, agricultural and vocational education, homemaking programs, school lunch programs, services for handicapped children, and, more recently, improvements in programs of science, mathematics, guidance, and languages. At the state level, majority preferences have been tested partly by the voting mechanisms involved in constitutional development and amendment, but largely by those involved in legislative action, and resources have been allocated accordingly. The effectiveness of these mechanisms in determining majority preferences for educational services and the willingness to allocate resources varies among states, in accordance partly with the fairness of the system of legislative representation and partly with the fairness of the distribution of voting privileges. The level of educational services of course also varies among states, according to the size of the common core of expectations for educational services, and according to the total amount of resources available for allocation. And at the local level, there are further variations in services, owing to differences in expectations (probably the discrepancy is greatest in rural-urban extremes), to differences in the degree to which the voting mechanism allows the expression of preferences, and to differences in resources available. An additional source of variation (which we have attempted to hold reasonably constant in our study) lies in the economic efficiency of the institutional arrangements (again, with one extreme found in the sparsely populated rural areas, and the other in densely populated urban areas).

The fact that states with fewer total resources typically allocate a larger portion of this total for education, while richer states typically allocate a smaller portion (in relation to the national median)[3] suggests that the postulated common national core of expectations for services is a powerful force toward adjusting some of the inequalities in educational services resulting from unequal distribution of resources among states. The core expectations are readily satisfied by the allocation of a relatively small percentage of resources in the wealthy states, whereas the poorer states must allocate a larger percentage of their resources to approach satisfaction of the common expectation for services.[4]

If we accept the legalistic interpretation that education is a function of the state, then the purpose of state government in organizing an educational system and allocating resources to its support will be the satisfaction of the core of expectations dominant among the effective voters of the state. A perceptive approach to this problem will include recognition of a range of social values within communities and among communities with differing expectations for educational services.[5/] The mean level of allocations to educational services that can be agreed upon through state-wide voting mechanisms will seem outrageously high to the community on the low end of a continuum of educational values, and outrageously low to the community on the high end. Furthermore, the policy makers for the state will recognize or quickly learn that if deviant communities at both ends of the scale are permitted to adjust resource allocation, and therefore the level of educational services, to their preferences, the communities at the low end of the values scale will make decisions with long-run consequences generally inimical to the social and economic welfare of the state; and communities at the high end of the values scale will make decisions generally beneficial to the state.

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[3] See "Rankings of the States" (Washington: National Education Association, 1959), Table 35, p. 24, and Table 46, p. 29. Of the top ten states ranked on per capita income, nine are below the national median on percent of resources allocated to education in 1957-58. The remaining state, California, mandated a high level of state support by constitutional amendment. Of the 10 states ranked lowest on per capita income, seven allocated to public schools more than the national median of percent of per capita income. Of the remaining 3 states, Alabama, with only 28.4 percent of its voting-age population voting in 1956, is clearly limiting the voting franchise, and the other 2 states both had smaller percentages of voting-age population voting in 1956 than the national mean.

[4] Note Hirsch's findings on the low elasticity of expenditures for education. Werner Z. Hirsch, Analysis of the Rising Cost of Education, (Washington Joint Economic Committee, Congress Study Paper No. 4, 1959).

The first objective in accomplishing the state purpose is to define a minimum level of educational services satisfactory to the state, and to assure that resources are available to every community to achieve at least this minimum level. This step has been rather generally accomplished in most states through mechanisms generically identified as foundation programs; it is accomplished in some states by full state support of the minimum program.

[5/] A step toward definition of the dimension of the postulated continuum of educational values is reported by Fred L. Strodtbeck "Family Instruction, Values and Achievement" in Talent and Society, David C. McClelland and others, ed. (New York: D. Van Nostrand, 1958).

However, our data indicate that access to resources will not guarantee their use for educational purposes. The second objective must therefore be to minimize the power of communities to make decisions about resource allocation to education which would reduce services below the level defined by the state as minimal, and to maximize the power of communities with high values to achieve their aspirations.[6/]

The general acceptance of the importance of the second objective, maximizing the achievement of high aspirations and an extension of the means for its accomplishment, may well be the most critical task in financing education in the decades ahead, for the states and perhaps for the nation as a whole. Its importance is underscored by the vast and increasing spatial mobility of our populations into and among the great metropolitan areas of the nation. In the long run this mobility may be conducive to the development of a new and truly national homogeneous core of social values in succeeding generations. For the short run, however, a closer examination of the dynamics of the movement raises serious questions as to how effectively the "melting pot" is really melting our culture into a more homogeneous whole.

[6/] Among the five states studied, only Wisconsin appears to be approaching the second objective, and that state approaches it in two ways. First, the level of educational services is defined not in dollars to be expended, but in minimum services to be rendered, and the provisions for resources allocations are flexible enough to adjust to wide variations in costs resulting from sparsity factors (though the state does guard against support of extreme variations resulting from economically inefficient districts by classifying districts and varying levels of support, higher for efficiently organized, lower for the inefficient). Second, the local allocation to support the minimum program is mandated, and the mandate is enforced by withholding all state support for failure to make the mandated levy.

The observations made earlier underscore the problem: the parent moving from one metropolitan area to another can find a school to serve his expectations. To rephrase the observation will sharpen the problem further: the deviant expectation can be served as well in one metropolitan area as in another. The mass of people flowing into the great centers are being sorted by many economic and social mechanisms and pressures into subunits, many of which are remarkable for the homogeneity within them, and are equally remarkable for the diversity among them. In this sorting process educational values are among the determinants of residence, and among the subunits, the schools in turn mirror, and perhaps contribute to, the diversity.

The historic function of the public schools in our society is that of a unifying rather than a divisive force. The unifying function doubtless will persist, and the state will continue to control educational policy at least to the extent of proscribing local decisions inimical to the welfare of the state. But diversity is clearly emergent and the state probably can find ways of encouraging deviant decisions which (though perhaps premature for statewide legislation) are clearly of benefit to the state.

Some Elements of Resource Allocation for Public Education in the United States

The basic assumption with which we have approached this study is that man in our society is a goal-seeking creature demonstrating a consistent tendency to perceive and aspire to more goals than his resources will permit him to reach at any given time. Hence man is constantly faced with the tasks of ordering his aspirations according to some system of priority, and allocating his available resources in accordance with that system. We proceed also on the assumption that, while the process by which the system of priorities is developed probably is not a rational process, it is at least a process which can be subjected to rational analysis.

For purposes of analysis, the decisions by which man allocates his available resources can be divided into two parts, those in the public sector of the economy, and those in the private sector. The public sector may be generally equated with government and the services provided by government. The decisions concerning resource allocation in the public sector stem from individual choices, but the choices are screened and clustered by mechanisms designed to yield political concensus. The private sector may be generally equated with individuals and non-governmental institutions, and the goods and services they produce and consume. Decisions made in the private sector are based on individual choices more directly expressed.

Competition for the available resources develops in the public sector among levels of government and among institutionalized services of government; it develops in the private sector among individuals, among institutions, and among individuals and institutions; and the two sectors compete.

A state public school system may be viewed as an institutionalized service of state government. It competes with other institutionalized services of state government for budget allocations made by the legislature. The amount of money it receives for operation, or for allocation to local operating units, is thus to some degree affected by the competitive claims of such agencies as highways, and such institutionalized services of state government as social welfare.

Similarly, a local public school system may be viewed as an institution which, although a subordinate part of the state-wide institution and affected by allocations made in the competitive arena at the state level, also competes with other institutionalized services of local government - highways, welfare, protective services, and others. The money a school system obtains from local sources is affected by the degree to which competition from these other institutions is effective.

At both levels the school competes with all the claims on resources that flow out of individual and institutional demands in the private sector including private institutionalized educational services.

A reasonably comprehensive approach to the problem of resource allocation for education would need to examine patterns, processes, and mechanisms in the following areas:

1. Defining the task of public education
2. Assessing resources needed by the institution, and the consequences of alternative uses for these resources
3. Allocating resources between the public and the private sphere
4. Allocating resources among the institutionalized segments of the public sphere
5. Allocating resources within the institution

6. **Evaluating the service of the institution, in terms of the accomplishment of the task as defined and in terms of its efficiency and effectiveness in the use of resources.**

Summary of Findings

The first phase of this study is concerned with one aspect of (5), the processes and mechanisms for allocating resources to local units within the institution of a state school system, and specifically with conditions of equity in the allocation indicated by the following questions.

How does the state assure availability of funds for local school districts?

1. **An allocation of fixed-unit amounts of revenue drawn from state-wide uniform taxes (usually income or sales taxes, or both) and uniformly distributed within classes of districts;**
2. **The yield of a fixed rate of taxation on the property tax base of the district;**
3. **An allocation from state-collected taxes of amounts varying in some inverse proportion to the yield of the fixed rate (the equalization program);**
4. **A delegation of authority to local districts to levy an additional tax on property above the rate mandated by the state.**

What is the relationship between the level of state support and inter-district variation in expenditures per pupil?

There appears to be less variation among districts in per pupil expenditures for education in those states offering a high level of financial support to the districts. The following states, ordered in terms of level of state aid (high to low), are also ordered in terms of variation in educational expenditure per pupil (low to high): Washington, California, New Jersey, Wisconsin. Nebraska, which provides only a mean of $18.00 per pupil from state funds, shows less variation in expenditure than Wisconsin, New Jersey, or California. However, Nebraska deviates from the sample in terms of level of expenditure, variation in valuation per pupil, and number of districts of 1,500 pupils or more.

What is the relationship between the level of state support and inter-district variation in required levy rates?

Tax rates on equalized property valuation are probably lower in states with high levels of state support. However, variations in tax rates among districts are probably not dependent upon the level of state support.

What is the relationship between the level of state support and the voluntary expenditures of the local school district?

The net expenditures borne by local property were analyzed, to separate the amount determined by state mandate from the amount expended as a result of local decision. It appears

> that the level of voluntary expenditures is lower in those states which provide a high level of fiscal support. But when viewed as a percentage of total current expenditures the voluntary expenditures vary little from 30 percent, and appear to be relatively independent of the level of state support. Furthermore, the findings gave no support to the thesis that reduction of local initiative results in reduced total spending. The states with higher support systems (in this sample) allocate a larger proportion of total personal income to education than do the low support states.

What is the relationship between the level of state support and the voluntary tax rate levied by the local district?

> The net tax rates on the equalized valuation of real property in each district were analyzed to determine what portion resulted from state-mandated minimum levies, and what portion from voluntary burdens assumed by the district. Except in Wisconsin, mean voluntary tax rates are lower in the high support states, and the pattern is consistent in the five states except for Wisconsin.

* * * *

A second phase of this study involved some exploratory efforts along lines suggested by the following questions:

Are expenditures for education in one period related to national productivity in a subsequent period?

A high correlation was found to exist between expenditures for education by states in one period and personal income payments a quarter of a century later. Correcting the expenditures for migration among states increased the correlation.

What is the effect of high levels of enrollment in non-taxsupported schools on the availability of resources for public school support?

A preliminary investigation of this problem yielded inconclusive results. As a basis for further study, it is hypothesized that high levels of enrollment in non-taxsupported schools free resources for public school support, but may result in limited access to these resources.

What is the effect of fiscal dependence or independence upon public school support?

In New Jersey, dependent districts have consistently higher expenditures per pupil, while in Wisconsin, the independent districts have higher expenditures. More significantly, in both states wealth factors (per capita income, per household income, and property valuations) are more closely related to per pupil expenditures in fiscally independent districts than in dependent ones. Wisconsin and New Jersey were the only states in the group studied with a sufficient number of dependent school districts to make it possible to study this phenomenon.

What is the relationship between the wealth of a district and the way in which expenditures are distributed among budget line items?

> **It was found that some budget line items, notably food services and community services, are subject to considerable variation among districts; others, notably certificated salaries, are relatively constant. Most of the flexible items are not highly correlated with assessed valuations per pupil. Other factors, such as ADA, appear to affect each district's internal allocation of funds.**

CHAPTER ONE

THE STUDY OF SCHOOL FINANCING IN THE HISTORICAL CONTEXT

Public school finance is an area of investigation within the field of public finance, which deals with the allocation of resources required to support the services provided by government. Yet the literature on school finance in the United States has developed in a curious isolation from studies of public finance. Public finance theorists, with few exceptions, have shown scant interest in problems related to financing public education. Similarly, with the exception of a few leading contributions, the literature of school finance until recently shows little sensitivity to the larger problem of allocating resources among the competing services of government, each of which reflects, in diverse ways, the clamorous and insistent demands of an increasingly complex society for services supported by the public budget.

Richard Musgrave has provided a clue to the reasons studies in public finance and school finance have moved in such different directions.[1] He distinguishes between social preferences and merit preferences in the area of public wants. Social preferences, he says, are diffused among citizens of a state; each individual is presumed to possess them, and their satisfaction is distributed equally among individuals. National defense is one example. Merit preferences are desired by only a select number of the population, and a portion of the population is excluded from the benefits. Merit wants become public wants only if the voting public considers them so meritorious that their satisfaction is provided for through the voting mechanism over and above what is provided for through the market mechanism. Education is an example.

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[1] Richard A. Musgrave, The Theory of Public Finance (New York: McGraw Hill, 1959), pp. 9-15.

As merit preferences become generalized in a society, the state inevitably assumes a larger share of responsibility for their satisfaction. However, in the instance of education, the diffusion of merit preferences proceeds irregularly. In the traditional society all educational preferences were satisfied through the market mechanism, that is, the individual bought the kind of education he wanted. In our society a number of educational preferences are satisfied through the public budget, but many still are satisfied through the market mechanism (and thus we have nursery schools, private schools, and private colleges and universities).

Early students of school finance chose to treat education in the context of social preferences, thereby assuming that demands for education are universal, an assumption generally unacceptable in public finance theory. Furthermore they often insist on the viewpoint that education is a unique branch of government, to be supported through decisions made separately from decisions on support of other services of government. Public finance investigators, on the other hand, generally view education in the context of merit preferences, are unable or unwilling to deal with the data available from school finance studies, and argue for balancing out preferences for education along with preferences for other public programs. Somewhere in the relatively unexplored structure of underlying values that shape demands for education probably lie some data which, when revealed, will provide new insights for both groups of investigators. School finance investigators, like those in public finance, lack these data. Educators tend to perceive the demand intuitively, and choose to emphasize those values which they perceive as clearly emergent. Public finance investigators, faced with assumptions they cannot accept in view of conflicting evidence from the current scene are inclined, perhaps unhappily, to set the whole problem aside as so far defying analysis.

The Criterion of Equality

Because school finance investigators generally assume that demands for education are universal (and therefore analyzable as social preferences), they have been much concerned with equity. This study began with the observation that equality in both the educational opportunity available to children and the property tax payments made to support of public education is a generalized value in our society, and a frequently used criterion for judging the effectiveness of state systems of support for public education.[2/] This observation implies an acceptance of the

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[2/] It should be noted that equality, as used here, and generally in the finance literature, is defined objectively. Equality can be defined subjectively to yield quite a different criterion, and Milton Friedman has explored some of the consequences of its application in "The Role of Government in Education," Chapter 9, in Economics and the Public Interest, (New Brunswick: Robert A. Solo, Editor, Rutgers University Press, 1955).

assumption of the universality of expressed demands for education. But as we shall see, this assumption has been shaken by the findings of this study.

Some of the earliest educational acts of the states were directed toward equalizing educational opportunities. Arvid Burke noted that:

> The states during the nineteenth century tried to secure equality of opportunity in elementary education through requiring a short minimum term, making attendance compulsory, and mandating that elementary instruction be free.[3]

These and other early attempts to establish equal opportunity imposed unequal tax payments on local districts because of great variations in taxable property. The plight of the poorer districts prompted legislatures to grant aid to these districts, and by 1925, two-thirds of the states were making grants to the poorer districts. Yet in many instances, these grants were not sufficient to relieve the local taxpayers, nor could the poorer districts offer services equal to those provided elsewhere in the state. Burke concluded:

> Over a century of experience in attempting to secure equality of educational opportunity through mandatory legislation, minimum standards, and minimum requirements has demonstrated that the policy by itself is ineffective in a decentralized school system with varying taxpaying abilities and local tax burdens.[4]

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[3] Arvid J. Burke, Financing Public Schools in the United States (New York, Harper and Bros., 1956), p. 396.

[4] *Ibid.*, p. 397.

In effect the states discovered that an equality of educational services could not be achieved unless greater attention was paid to the tax payments imposed. There followed a period during which the major emphasis was on equalization of both services and taxes. This period began in 1905 with a study by Ellwood Cubberley, who was the first to apply the criterion of equality systematically to systems of financial support for schools.[5/] The theory was advanced by the work of George Strayer and Robert Haig, and, largely through the influence of Paul Mort and his students, has been incorporated into many of the programs of state support existing today.

Cubberley's investigation, clearly premised on the assumption of universality of demand for education, led him to the conclusion that the state should distribute funds to local schools in such a way as to equalize "the burdens and advantages of education." Subsequently Cubberley and others, notably Strayer and Haig,[6/] contributed to the development of a mechanism for implementing the policy of equalization - the foundation program. In its idealized form the foundation program sets a minimum level for the educational services (expressed usually in dollars to be expended per child or per classroom) below which no local

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[5/] Ellwood P. Cubberley, School Funds and Their Apportionment (New York: Columbia University Press, 1905).

[6/] George D. Strayer and Robert Murray Haig, The Financing of Education in the State of New York, a report reviewed and presented by the Educational Finance Inquiry Commission of the American Council on Education (New York: MacMillan Co., 1923).

school is allowed to operate, and varies the flow of state revenues according to the yield of a fixed rate applied to local taxable property.[7]

Foundation programs have existed for more than a quarter of a century, and more than forty states have adopted them in some form. Since the criterion of equality prompted the creation of this mechanism, equality should be a relevant criterion with which to appraise its effectiveness. The first task of this study was therefore to apply the criterion of equality to educational services and tax payments, much as Cubberley did at the beginning of the century, but with some refinements toward increasing the precision of the application. The most notable of these refinements is made possible because of more accurate information on property value now available through improved programs of state equalization and supervision of assessments. Also the elimination of data on smaller school districts has removed many of the variations due to sparsity. Furthermore, some refinement of the accounting information accomplished in this study improves the comparability of the data.

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[7] State funds are drawn usually from taxes on income, or consumption, or both, and local revenues from taxes on property. The foundation mechanism, regardless of its effectiveness as an equalizing device, has been useful, in each state using it, for adjusting the burden of school costs to the political concensus as to what constitutes a comfortable burden on each of the three basic revenue sources. The allocations are dependent, of course, on fairness of representation and universality of the voting franchise, as well as on demand.

The Criterion of Adaptability

A second concept in school finance theory - the criterion of adaptability - developed in response to the first, as investigators belatedly recognized that public demands for education were in fact variable. This criterion, too, has received considerable attention in the school finance literature. It counterbalances the criterion of equality, in opposing excessive uniformity.

Mort and his students have made a monumental contribution to the development of the concept of adaptability. Mort comments:

> . . . our whole emphasis on local control and operation of schools had as a very important purpose a potential contribution to adaptability. This is what people meant when they said that local control and support encouraged experimentation. These measures embolden communities to try new ways of meeting old problems and to contrive ways of meeting newly emerging problems.[8]

He emphasized the necessity for communities to have "tax-leeway"; that is, state controls over local taxing power should be restricted to allow some taxing power to remain in local hands so that the community is able to adapt its program to local needs.

> It is not sufficient to equalize burden; in addition, it is necessary to see that the property tax, which supports local initiative, is not unduly burdened as compared with other taxes. It is not sufficient to have an adequate

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[8] Mort, Reusser, and Polley, Public School Finance (New York: McGraw Hill, 1950), p. 207.

> tax base; the locality must have tax leeway, hence tax-limitation laws should be opposed. Nor is it sufficient to have tax leeway and an adequate tax base, but it is necessary also that the local authorities have final judgment with respect to a wide range of expenditures . . .
>
> In brief, the adaptability principle serves as a check on the other principles, particularly the equalization and prudential principles. It demands that we consider the financial health of the abler districts as well as that of the poorer districts of the state and thus frustrate the tendency to equalize down as well as up. It defines the bounds within which the prudential principle may operate, frustrating the attempts to place prudential management uppermost in the relation of the central agencies with the localities.[9]

Benjamin Pittinger noted that the criteria of equality and adaptability tend to be contradictory. We consider his "principle of stimulation" and "principle of equalization" to be equivalent to the criteria of adaptability and equality:

> As the principle of stimulation has tended to increase participation of local supporting units, so the principle of equalization is tending to increase that of central units. The two principles necessarily lead in opposite directions.[10]

Equality and adaptability are the central themes in the development of school finance literature. That they should be in conflict is inevitable, for they reflect the libertarian and egalitarian interpretations of fiscal federalism, whose conflict is older than our nation. (Again it should be noted that we are dealing with equality defined objectively. If defined subjectively, the conflict with libertarian notions can be resolved.) Cubberley recognized the relevance of these two interpretations of fiscal federation for the financing of public schools when he defined school finance as a field of study. He noted then the legal establishment of the unitary concept of state-local relations in education and the traditional entrenchment of the concept of local autonomy. He found that state aid to local school districts was being distributed on two contradictory principles - equalization and reward for effort. Cubberley favored the egalitarian approach, and his bias seems to be shaped by an unshakable belief in the universality of demand for educational services, a conviction that as we have noted has shaped much of the subsequent work in school finance.

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[9] Ibid., pp. 207-8.

[10] Benjamin Floyd Pittinger, An Introduction to Public School Finance (Cambridge, Mass.: Houghton Mifflin, 1925), p. 273.

Between the publication of Cubberley's study in 1905 and the initiation by the American Council of Education of the educational finance inquiry in 1923, Harlan Updegraaf attempted a synthesis of the two conflicting concepts; however, owing to the emergence of the modern form of the foundation program out of the 1923 study, his concept of state responsibility in school support has until recently received little attention. It is significant that Mort, perhaps the *spiritus movens* of school finance theory for three decades, has recently highlighted Updegraaf's contribution:

> Looking back on it /_Updegraaf's proposal7 in the light of our present interpretation of

> the payment-for-effort phenomena in terms of adaptability, it has many challenging implications which will doubtless cause it to come up again and again for consideration as the field develops.[11]

Purposes in Education - State and Local

The main body of the literature of school finance reviewed to this point, whether egalitarian or libertarian in viewpoint, has stressed the value of local control of education. A few writers have rebelled against the results of excessive localism, suggesting that even though educational values may not be diffused as generally as school finance studies indicate, merit considerations should override consumer sovereignty.

Swift, for instance, favored a larger measure of statewide financing for the public schools.

> That as a nation we are failing to provide thousands and thousands of prospective citizens with the educational opportunities essential to individual and national intelligence, morality, and welfare is only too evident. . . after 50 years of support by local taxation, we find ourselves in an educational situation marked by economic and educational inequalities. . . it would seem that the time has arrived when we should undertake to ascertain whether or not a thoroughgoing modification, perhaps, indeed a complete reversal of our traditional policies of school support may not be necessary. May not the solution of our financial difficulties lie in shifting the burden in such a manner as to make the proper portion of its weight rest upon the state rather than upon the local communities.[12]

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[11] Mort, Reusser, and Polley, p. 209.

[12] Swift, Fletcher, Harper, State Policies in Public School Finance, Bulletin, 1922, No. 6 (Washington: Department of the Interior, Bureau of Education, Government Printing Office, 1922), p. 3.

Morrison argued against vesting excessive discretion in the local district. Like Swift, he saw the importance to the nation of the education of its youth, and felt that the well-being of the individual was of greater importance to the nation in the long run than the doctrine of local control.

> He who decries as paternalism effective concern on the part of the state for the education of all of its youth is little aware how nearly neglect and fiscal inequality touch interests which he holds most dear. In the end, the poor schools are traceable to inadequate local support, to untrammeled localism, to the fatuous belief that a fiscal system appropriate to pioneer days can with non-essential changes be applied to the economic and political conditions of the twentieth century.[13]

We have traced the theme of equalization through the school finance literature, and shown that it now shares priority with the balancing ideal of adaptability. We have noted the conflict, and related it to a deeper and persistent conflict between egalitarian and libertarian ideals in our society. We have also attempted to sketch briefly the existence of another basic conflict: should decision-making on educational policy be centralized in the state or decentralized among local communities? The director of this study reported earlier some efforts to reconcile these conflicting viewpoints. He examined a number of efforts made to establish an external criterion for the appraisal of state programs supporting education and concluded:

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[13] Henry C. Morrison, *The Financing of Public Schools in the State of Illinois*, Vol. IX of Educational Finance Committee Inquiry Commission (New York: MacMillan Co., 1924), p. 59.

> The dissatisfaction which is implied by these examples of effort to establish a substitute criterion raises questions about how rigorously the criterion of equality is being applied. From the research, this criterion appears to be the most important single factor in shaping the foundation program, yet any observation of the operational aspects of school support programs will indicate that no foundation program is really equalizing either educational burdens or benefits, nor could be made to do so as it is presently defined.[14]

He suggests that "the success of the foundation program has come, not from equalizing among local units the costs of education borne by the property tax, but as a device for the allocation by state legislatures of the costs of schools among several revenue sources."[15]

Finally he suggests a basis for reconciling both the conflicts of equalization and adaptability on the one hand, and that of centralization and decentralization on the other in the following statement: "The primary purpose of the state in financing public schools is the accomplishment of state-defined purposes, while encouraging local interpretations and elaborations on them."[16/]

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[14] H. Thomas James, "Toward a Unified Concept of State School Finance Systems," Ph.D. Dissertation, University of Chicago (Chicago, 1958), pp. 19-20.

[15] *Ibid*., p. 21. Note in this connection that most of the controversy surrounding legislative hearings on school support in the several states develop not on points related to total allocations, but on proposals to shift the incidence of school costs among the various bases.

The study reported here continues the traditional line of inquiry into the effects of state efforts to equalize property taxes and educational programs. The bias has been stated in this chapter. The principal innovation is the identification of the portion of the property tax allocated by the state through state-mandated levies. Certain refinements of data mentioned briefly earlier in this chapter are detailed in Appendix A. The research design and tests are reported in Chapter Two.

[16/] Ibid., p. 38. Even if this suggestion were to make some contribution to the resolution of conceptual conflicts in school finance, it still leaves the task of bridging the gap between problems conceptualized in the field of school finance and those which are the substance of study in the broader field of public finance. The bridging of the gap between these diverging fields of inquiry appears to depend in part on the definition of purpose of the state in terms that are usable in the normative models of public finance research. A promising beginning point is suggested by the set of terms used by Musgrave which was noted earlier in this chapter, that is, the subdivision of public wants into social wants (satisfied by public services universally consumed) and merit wants (satisfied by public services when especially meritorious, but otherwise satisfied through the market mechanism). Another possibility is that investigators in both fields might find a basis for communication in the familiar language of the social scientist along some general channels suggested in the rationale included in the Introduction.

CHAPTER TWO

THE TESTS FOR EQUALITY AND INITIATIVE

The tests for equality and initiative are reported in this chapter. The tests are based on the assumption that state governments attempt to achieve conditions of equality among school districts by means of the foundation program. Therefore, when some part of the costs of operating the public schools is shifted from locally collected taxes to state-collected taxes, the mechanisms through which the shift is accomplished are designed to create a more equitable distribution of both the educational services and the local tax payments supporting education. To determine the degree to which tax payments were distributed equitably, the tests were applied to two rates[1/] levied on property for school purposes. To determine the degree to which educational services were distributed equally, the tests were applied to current expense, and to net current expense per pupil for operation of public schools.

The Theorem

In order to test the assumption that equality among districts is a function of state policy, the following theorem was formulated.

[1/] All references to tax rates are in terms of rates in mills applicable to equalized (not assessed) valuations of taxable property. See Appendix A for discussion.

The variation among districts, with respect to both the tax rates applied to local taxable property and the current expense per pupil, is a function of the amount of public school costs borne by the state.

State constitutions and statutes, reflecting the value placed on equality, make this theorem appear plausible. The theorem also appears to be based on sound logical argument. Variations in wealth among local districts inevitably create inequalities in the tax payments and in educational services. If the state were to raise all revenues by means of a uniform tax rate, and distribute them on the basis of a uniform amount per pupil, the variations in tax rates and in amounts available per pupil would be reduced to zero. Where the state's participation is minimal and the number of districts is large, wide variation in both burdens and benefits must occur. We would expect to find a wide range in tax rates and educational services in the state of Nebraska, with its 4,600 school districts. We would expect to find little or no variation in Hawaii, with its single district.

The major difficulty in applying a test for equality lies in obtaining the necessary data. The cost of current operation per pupil is generally available, although it is often distorted by factors associated with population density. Measures of wealth expressed in assessed valuation are also available, but are especially difficult to compare because of variations in assessment practices. Mandated and voluntary levy rates and expenditures must be derived.

The Sample

Five states and 316 districts within these states were chosen for study in such a way as to attempt to remove the effect of irrelevant factors. The criteria used for selection of the states were as follows:

(1) Since the level of state support was to be treated as the independent variable, a broad distribution of states on this continuum was desired. In order to obtain a proper distribution, the mean and standard deviation of amount of state support per pupil were computed, on the basis of 1957-58 data on sources of revenue per pupil.[2] Five points were selected on this continuum, one at the mean and the other four at sigma intervals above and below the mean, as shown in Table 1.

Table 1

State revenue per pupil at selected intervals on national scale

Standard Deviation from the Mean	Amount of State Revenue Per Pupil
+2	$ 290
+1	218
0	146
-1	74
-2	2

(2) Some tolerance in the selection of states near these five points was allowed in order to select states with reasonably

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[2] "Rankings of the States" (Washington: NEA, 1959), Table 38.

effective programs for the equalization of property assessments.[3/]

(3) States near these five points that were close to or above the median in personal income payments were selected in order to reduce the effects of variation in personal income among the states. It should be noted, however, that broad differences in income remain. Some of the problems resulting from these differences are detailed below.

(4) States whose rank on the ability scale differed widely from their rank on the expenditure scale were avoided. An inspection of data on such states suggested that the current expense per pupil may be distorted, owing to factors associated with density of population.

(5) States with local school district systems were desired in this test, which was designed to measure equality achieved by means of the foundation program. Therefore only states with 400 or more local districts were chosen.[4/] This criterion minimized the effects of centralization, which is one way of achieving equality.

[3/] Federation of Tax Administrators, Equalization Programs and Other State Activities in the Property Tax Field, Preliminary Report (Chicago: FTA, 1957).

[4/] The number was chosen arbitrarily, but was suggested to the director of this study by a survey he conducted in 1955 among the chief state school officers in states with local district systems. Four hundred districts seemed to be about the optimum most of these officers envision for their states if and when projected program of district reorganization can be accomplished.

(6) When application of the other five criteria left some choice within half a standard deviation from the point selected, states were chosen with which the author had some experience, or which would reduce the amount of travel required.

The application of these criteria produced the five states shown in Table 2 below. Also shown are the amount of state revenue expended per pupil and the rank on expenditures among the states. With respect to state revenue, the predicted selection points shown in Table 1 are reasonably approximated by the amounts spent by the states shown in Table 2.

Table 2

Selected states, percent from state sources, rank and amount of state revenue per pupil[5]

		Revenue per Pupil From State	
State	Percent of Revenue from State Sources	Amount of State Revenue	Rank in Nation
Washington	50.2	289	3
California	39.1	207	8
New Jersey	26.4	118	27
Wisconsin	*21.4*	*83*	*41*
Nebraska	6.9	18	50

Selection of Districts Within States

To limit further the effects of sparsity factors and inefficient district organization, an arbitrary minimum size for districts to be

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[5] NEA, "Rankings of the State."

studied within the five states was set at 1,500 pupils.[6]

Since, in all of these states, some elementary and secondary school districts are organized separately, we had hoped to combine data for elementary and secondary school districts by high school districts, and treat each set of data produced in this way as representing a unified school district. We found, however, that combining districts in this manner brought back into our data many of the sparsity effects that we were attempting to exclude by the minimum size limit. The statistics developed from these artificially created districts were in fact significantly different from those of the unified districts selected for study. We therefore excluded such districts from further consideration, and focused our attention on 12-grade districts of 1,500 or more pupils.

In four of the states junior colleges are operated within the framework of some local school districts that also operate elementary and secondary programs. However, correspondence with the districts enabled us to eliminate the effects of the junior college program and thus to establish sets of data for these districts that were comparable to other districts operating from kindergarten through twelfth grade.

A small number of California districts were also eliminated from consideration in this study because their boundaries crossed county lines, thus complicating the problem of equalizing assessed values of property.

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[6] The figure of 1,500 pupils has received continuing support as the minimum number for efficient and effective school programs since it was proposed in 1933 in the Report of the National Conference on Financing Education (Washington: NEA, 1933). It is recognized, however, that by standards now accepted in many states (notably California, where state policy indicates a desirable minimum of 10,000 pupils), the minimum used here is unacceptable. Data discussed elsewhere in this report suggests a significant drop in efficiency in the smaller districts included in this study.

Working Hypotheses

In the test for equality, the general theorem stated above was formulated into two hypotheses, designed to assess the effects of differing levels of state support on variations in tax payments and educational benefits. The hypotheses were stated as follows:[7]

> The higher the level of state support, the less will be the variation in total property tax rates for current expense of education.
>
> The higher the level of state support, the less will be the variation in current expense per pupil.

A second pair of hypotheses was added to assess the effect of different levels of state support on local initiative:

> The higher the level of state support, the lower will be the mean voluntary property tax rate. (See below for definition of voluntary.)
>
> The higher the level of state support, the lower will be the mean voluntary expenditure per pupil.

The Basic Data

In order to test the above hypotheses, the following items of information were required for each district in the sample:

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[7] For readers not familiar with the terms used in this section, their definitions and a discussion of how they were developed are presented in Appendix A.

The required levy rate for current expense. This is the rate (expressed in mills) which must be applied to the equalized value of property in order to support that portion of current expense borne by local property owners.

Expenditures per pupil. This is the current expense divided by the number of pupils in average daily attendance (hereafter ADA).

The voluntary levy rate. This statistic is produced by subtracting the state-mandated property tax rate from the levy rate required to support that portion of the current expense which is borne by the property tax. The remainder is voluntary (in the sense that it is locally determined, though of course the term ignores coercive factors in the market mechanism).

The voluntary expenditures. To obtain this figure, the minimum expenditure per pupil mandated by the state is subtracted from the current expense per pupil.

The development of these statistics is discussed below. For anyone not familiar with the terms, a more detailed explanation of their meaning and the procedure by which they are derived is given in Appendix A.

The Required Levy Rate

The current expense for each district was obtained from published reports of the five states' departments of education, or from their office records. All revenue receipts applicable to current operation except the local property tax levy were subtracted, thus reducing current expense to the net amount to be paid from local property tax receipts.

The equalized valuation of taxable property in each district was obtained from the department of education publications or records, or was developed from assessed valuations corrected by factors provided by state tax authorities. The net expense borne by the local property tax was then divided by the equalized valuation of the district to yield a required levy rate for current expense. The mean rates and their standard deviations were then computed. Because the means varied considerably from state to state, and because we were interested in testing relative variation, a coefficient of variation (V) was also computed.[8] These data are shown in Table 3.[9]

Table 3

Means, standard deviations, and coefficients of variation of required levy rates for current expense of schools, 1958-59.

State	Number of Districts	Mean Required Levy Rate (in mills)	Standard Deviation	Coefficient of Variation
Washington	72	3.3	1.9	57.6
California	59	5.6	1.1	19.6
New Jersey	121	11.4	2.8	24.6
Wisconsin	46	9.7	1.7	17.5
Nebraska	18	8.8	1.6	18.2

Hypothesis: The higher the level of state support, the less will be the variation in total property tax rates for current expense of education. This hypothesis is not supported by our data.

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[8] $V = \frac{\sigma}{M} \times 100$. Frederick C. Mills, *Statistical Methods* (New York: Henry Holt, 3rd Edition, 1955), pp. 129-30.

[9] In all tables, states are listed by amount of revenue per pupil from state sources from highest to lowest.

We did not find any consistent reduction in the amount of variability in property tax rates in states with a high level of support. This result may appear somewhat surprising since an increase in state funds raises the floor of expenditures and frequently is associated with greater restrictions on maximum levies; and since a higher floor and a lower ceiling might logically be expected to reduce the degree of variation in rates among districts. The following suggestions, which have emerged from analyses of available data, are offered as partial explanations of this phenomenon:

(a) The evidence available appears to indicate that the degree to which a community will tax itself to support education depends more on the shared aspirations of its citizens than on any other single factor. For this reason, the effect of state aid varies from place to place. Some communities, placing a high value on education, will use state aid to increase expenditures. Other communities, with different value systems, will use state money as a substitute for local expenditures. We found districts in all states pursuing both alternatives. We found districts in two states which held expenditures constant even after the local burden reduced to zero, allowing surplus revenues to flow into increased bank balances, rather than into educational expenditures. We note that the substitution effect[10] is sharply reduced by the following measures, all in effect in one or more of the states under study: (1) minimum standards for educational programs, enforced by withholding state aids for non-compliance; (2) state mandated minimum levies, enforced by withholding aids; and (3) state equalization allocations based on a determination of net costs to be shared by district and state.

(b) The fact that the two high support states (Washington and California) distributed state aid on the basis of assessed valuation in the 1958-39 school year[11] may help to explain why the variation in tax burden among school districts in these states is greater than anticipated. Equalized valuations were used to analyze the effects of state funds, whereas both states used assessed valuations to distribute the funds.

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[10] The substitution effect noted here is consistent with Renshaw's findings. (Edward F. Renshaw "A Note on the Expenditure Effect of State Aid to Education." The Journal of Political Economy April, 1960, pp. 170-74). Using 1950 data in a least squares analysis, he suggests that 84 percent of state aid substitutes for local support, and that only 16 percent results in increased educational expenditures.

[11] California shifted to the equalized valuation base in the 1960-61 school year.

> Because of wide variations in assessment practices, the two scales bear little relationship to each other. The equalizing intent of the state distribution is therefore distorted to the degree that the county assessor deviates from average practice.

Other factors undoubtedly are involved in this phenomenon. Even equalized valuations are probably not good indicators of taxpaying ability (see discussion in Appendix A) and property values however measured are not good reflectors of short-period changes in income. Age distribution of the population probably also is a factor, and proportion of students in non-public schools may be.

Current Expense per Pupil

The current expense of operating elementary and secondary schools for each district in the 1958-59 school year was divided by the ADA obtained for that year from publications or records of the states' departments of education. The means, standard deviations, and coefficients of variation are shown in Table 4.

Table 4

Means, standard deviations, and coefficients of variations of current expense per pupil, 1958-59

State	Number of Districts	Mean Expenditure Per Pupil	Standard Deviation	Coefficient of Variation
Washington	72	$ 378	31	8.2
California	59	406	61	15.0
New Jersey	121	435	67	15.4
Wisconsin	46	394	62	15.7
Nebraska	18	269	34	12.6

Hypothesis: The higher the level of state support, the less will be the variation in current expense per pupil.

Variation in services (as represented by the amount spent per pupil) is much less in Washington than in the other four states. California, New Jersey, and Wisconsin show a progressive increase in relative variation, (although the differences among the coefficients of variations are not statistically significant). Nebraska, however, with the lowest amount of state aid, shows less variation in benefits than the above three states.

Nebraska's departure from the expected pattern may be due in part to the floor effect of the common core of expectations postulated in the Introduction, and in part to the fact that our sampling procedure eliminated all but 18 of this state's districts. These 18 districts are probably not typical of the state as a whole. The range of assessment among these districts is much less than the assessment range in the other four states. While our test provides no sound basis for accepting the hypothesis, we conclude that the variation in benefits is perhaps less in those states with a high level of state aid, and will seek further evidence from a larger number of states in this second phase of our study.

Since property valuation is closely connected to both expenditures and levy rates, a further examination was made of the possible effect of differences among states in the means and variations of full valuation per pupil. The following table indicates the magnitude of these differences.

Table 5

Full valuation per pupil in selected states, 1958-59

State	Number of Districts	Mean Full Valuation per Pupil	Standard Deviation
Washington	72	21.0	7.9
California	59	41.9	25.6
New Jersey	121	32.1	13.5
Wisconsin	46	30.7	10.7
Nebraska	18	24.8	5.9

In view of the interstate differences indicated in the above table, a further refinement of the data was undertaken. This consisted of reducing the samples of districts in each state to smaller samples with identical means (28.5) and standard deviations (8.5). Random processes were used in the discarding of data. The tests of variability were applied to the derived samples. The result was to confirm the findings reported in the text, with little gain or loss from the original results. It would appear that the findings were not distorted by these differences.

The Voluntary Levy Rate

In each of the five states a minimum levy is mandated by the state, or an inference of a mandate can be drawn (see discussion in Appendix A). The mandated rate (adjusted where necessary to make it applicable to the equalized tax base) was subtracted from the required levy rate to yield the voluntary levy rate (in mills) as summarized below in Table 6.

Table 6
Mean voluntary rates, standard deviations, and voluntary rates as a percent of required levy rates, 1958-59

State	Number of Districts	Mean Voluntary Levy Rate (in mills)	Standard Deviation	Voluntary Levy Rate as Percent of Required Rate
Washington	72	.8	1.5	24
California	59	3.0	1.1	54
New Jersey	121	6.4	2.7	56
Wisconsin	46	4.7	1.7	48
Nebraska	18	5.2	1.6	59

Hypothesis: The higher the level of state support, the lower will be the mean voluntary tax rates.

The two states with the highest proportion of state support showed the lowest mean voluntary levy rates. Furthermore, with the exception of Wisconsin, the relationships are as predicted when the voluntary rates are corrected to percentages. Since the pattern is not consistent among the five states, however, our evidence is not conclusive.[12] We are inclined to seek evidence from a larger number of states before accepting this hypothesis. The broader band of equalization which characterizes the Wisconsin program, discussed below in the section on support patterns, perhaps accounts for the displacement of Wisconsin on this continuum.

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[12] The rho between ranks on level of state support and ranks on mean voluntary levy rates was -.70, not significant at the .05 level, although in the right direction. Because of the likelihood that the voluntary rate is affected by the proportion of state support, the mean voluntary levy rate was converted to a percent of the required levy rate and rho was computed between rank on that percentage and the rank on level of support. This rho was -.80, still not significant, but approaching significance to a point that supports our inclination to seek evidence from additional states before rejecting the hypothesis.

A factor other than level of support probably affects the variation. Washington is most restrictive on maximum levies, requiring a 60 percent vote for exceeding state-prescribed minimum levy rates, which probably accounts for some of the differences from California variation, where a majority vote suffices. New Jersey, in turn, is less restrictive.

The Voluntary Expenditure per Pupil

The net current expense to be borne by the local property tax, the yield of the state-mandated levy, was divided by the resident ADA (because the effects of the non-resident ADA had been removed by subtracting tuition payments and any other revenues accruing from non-resident ADA) to yield the voluntary expenditure per ADA as summarized in Table 7.

Table 7

Mean voluntary expenditures per resident pupil in average daily attendance, standard deviations, and voluntary expenditures as a percent of total expenditures, 1958-59

State	Number of Districts	Mean Voluntary Expenditure Per Resident ADA	Standard Deviation	Voluntary Expenditure as a Percent of Total Expenditure
Washington	72	$ 14	22	4
California	59	109	46	27
New Jersey	121	106	65	24
Wisconsin	46	134	48	34
Nebraska	18	128	41	48

Hypothesis: The higher the level of state support, the lower will be the mean voluntary expenditure per pupil.[13]

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[13] Several reviewers suggested that we in effect may be dealing with an identity in this statement. We are inclined to think not, for we postulate a state with local districts, some of which will always want a higher level of educational services than can be supported through state-wide concensus.

The high support states allocated from local funds smaller amounts per pupil and smaller percents of total expenditure, and the pattern is consistent except for New Jersey.[14/] The equalizing effect of the common core of expectations postulated in the Introduction (p. 5) perhaps accounts for New Jersey's deviation. Again we are inclined to seek evidence from a larger number of states before rejecting or accepting this hypothesis.

Despite the decline in voluntary expenditures that appears to accompany a high level of state support, we cannot conclude that initiative to spend for education is lessened in high support states. In fact, the high support states appear to spend a larger portion of total personal income for education than do the low support states. (See Appendix D.)

Conclusion

The hypotheses upon which this study is focused are based on the assumption that the institutional framework created by the state does affect the degree of equality of local tax payments and educational services that exist among school districts. Our findings, while far from conclusive, do lend support to this assumption. They suggest that the consideration of mandated levies may add significant depth

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[14/] The rho between ranks on level of state support and ranks on voluntary expenditure per pupil is -.80, not significant at the .05 level, but in the right direction and approaching significance. The rho between rank on level of state support and rank on voluntary levy as a percent of required levy is -.90, significant at the .05 level.

to our understanding of the process of resource allocations to education.[15]

Other factors, many of them nongovernmental, affect tax levels and expenditures in the various school districts. Some of these factors have been studied. The results of these studies are reported in Chapter Three.

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[15] An extension of the work reported here is contemplated and will be supported by a new contract with the U. S. Office of Education. The next phase will include a larger number of states and will further analyze the effects of differing levels of state support on local tax levies and educational expenditures.

CHAPTER THREE

EXPLORATORY STUDY OF SOME CONCOMITANT VARIABLES AFFECTING EXPENDITURES FOR EDUCATION

In addition to the basic hypotheses discussed in Chapter Two, we agreed to explore some other factors that perhaps bear on resource allocation to education. Some of these factors are institutional in nature; others are related to the socio-economic climate.

In the first place, resources must, of course, be available before they can be allocated. In four of the five states, expenditures for education are positively related to the taxable valuation of the local districts. However, an examination of the correlation coefficients indicates that taxable valuation is not the only determinant of educational expenditures, and that, although it is an important determinant in California, it appears to be irrelevant in Washington.[1/] Furthermore, the level of support provided for the

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[1/] Pearson product-moment correlations between (1) total valuation per pupil and expenditure per pupil in five states, (2) state aid per pupil and expenditure per pupil in five states are as follows:

State	Correlation (1)	Correlation (2)
Washington	-.07	.17
California	.83	-.57
New Jersey	.43	-.44
Wisconsin	.54	-.08
Nebraska	.38	-.40

schools by the state and federal governments adds little to the explanation of varying levels of expenditure among communities. In fact, in four of the five states, state aid is negatively related to the level of expenditures. It is clear, then, that factors other than taxable valuation and aids must be considered in any attempt to explain levels of expenditures.[2]

Institutional Factors Influencing Educational Expenditures

The Task of the School

We noted in the proposal for this study that the statutes governing education in each of the states can be categorized (1) as statutes that create institutional structure and provide for institutional maintenance, and (2) as statutes that specify the tasks of the school. We hypothesized a positive relationship between the degree to which expectations for performance are specified, and the level of state support. This hypothesis was not supported by our findings.[3] Considerable variation was noted in the degree of specificity with which

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[2] Figures 1 (a-e) and Figure 2 explore the interrelationships between state aid, valuation per pupil, and expenditures per pupil. Figures 1 illustrate the inverse relationship between state aid and valuation per pupil in those states with relatively effective equalization programs, as contrasted with an almost random distribution of districts in those states where state aid bears no close relationship to property valuation. Figure 2 shows the distribution of districts in each state according to levels of expenditure. The reader is referred to Appendix C for a more detailed treatment of the institutional backgrounds to which these data are related.

[3] J. Alan Thomas, "The Educational Task as Specified in the Statutes of Five States" (Stanford: School Finance Study Working Paper No. 6, unpublished, 1960).

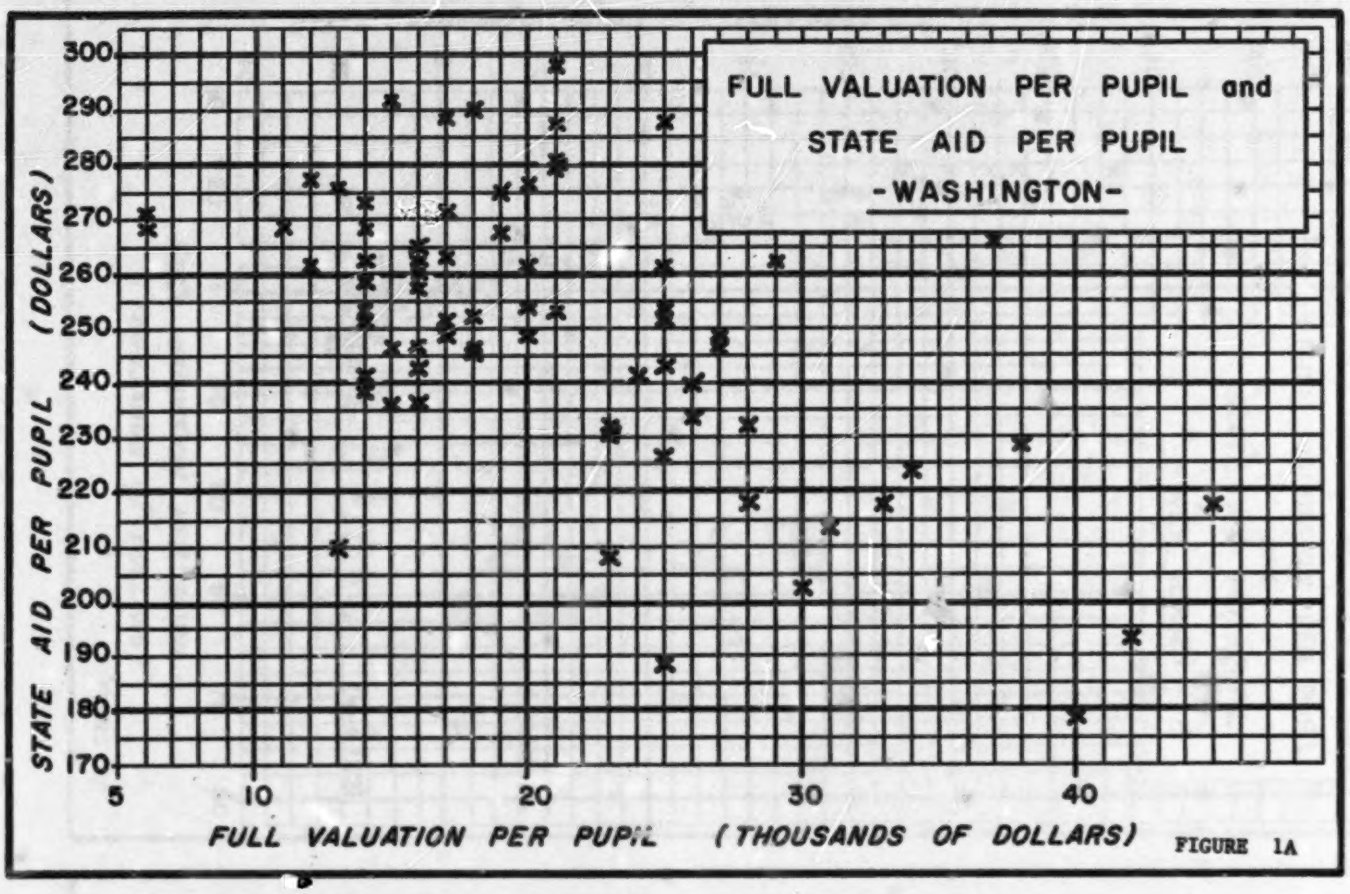

FIGURE 1A

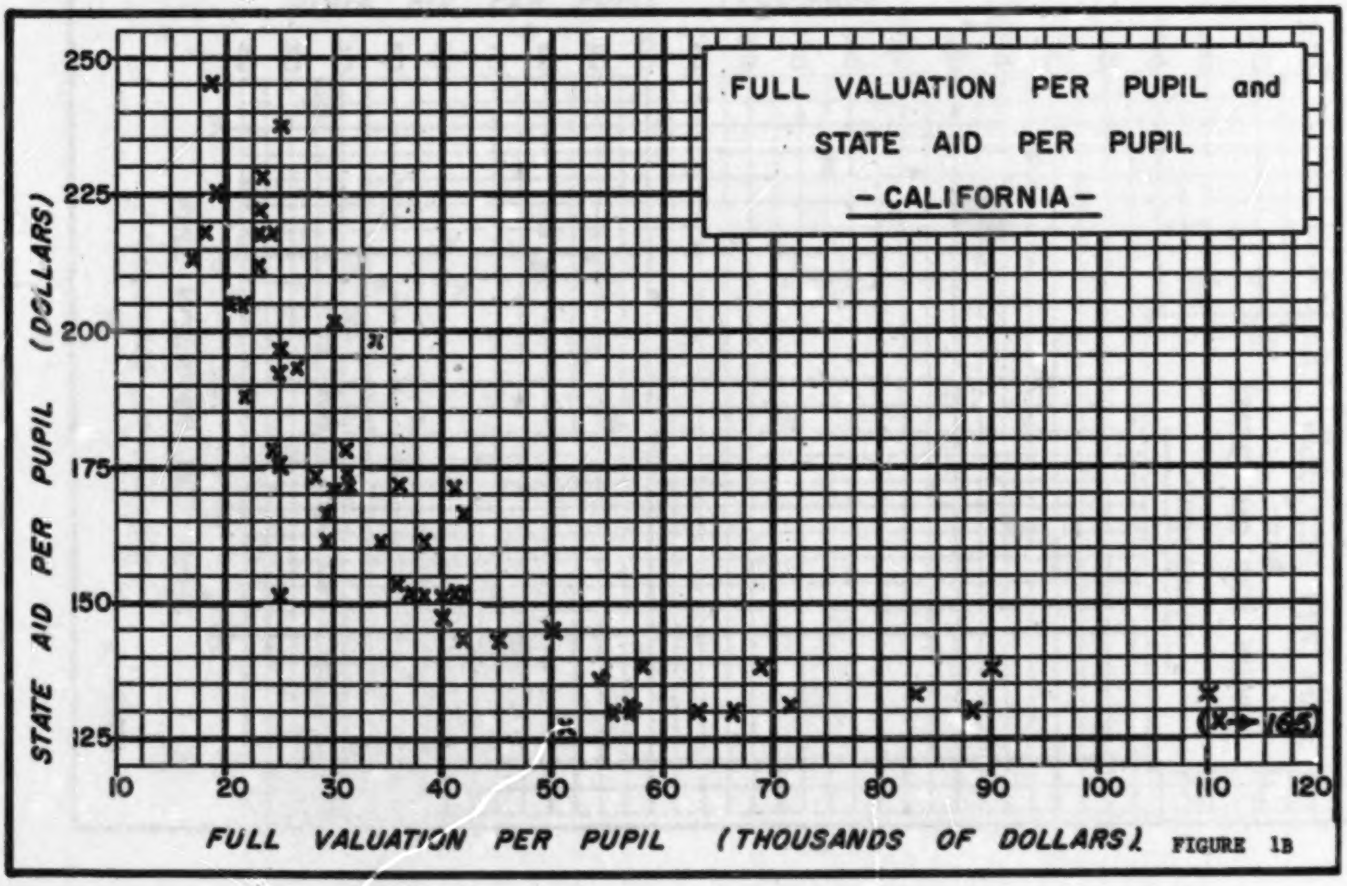

FIGURE 1B

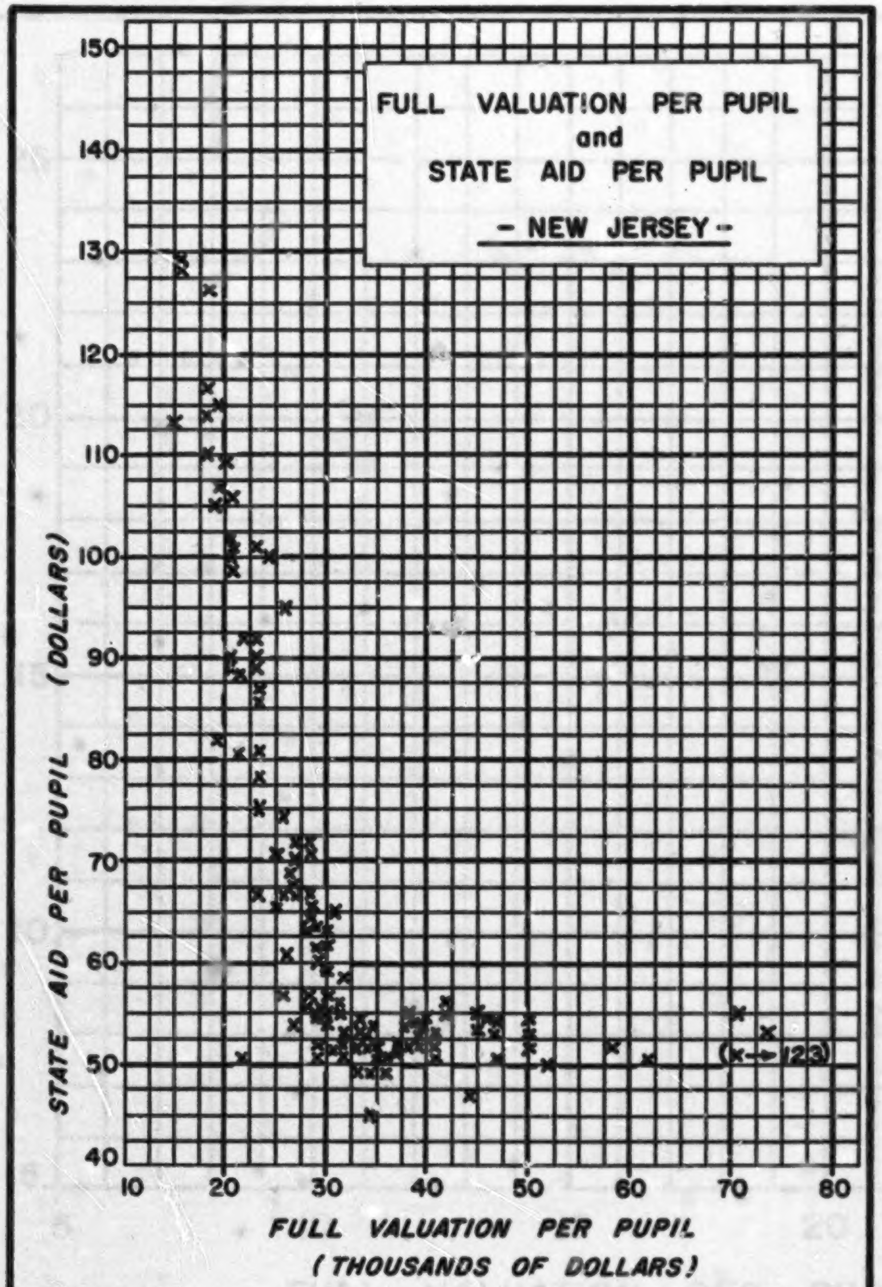

FIGURE 1C

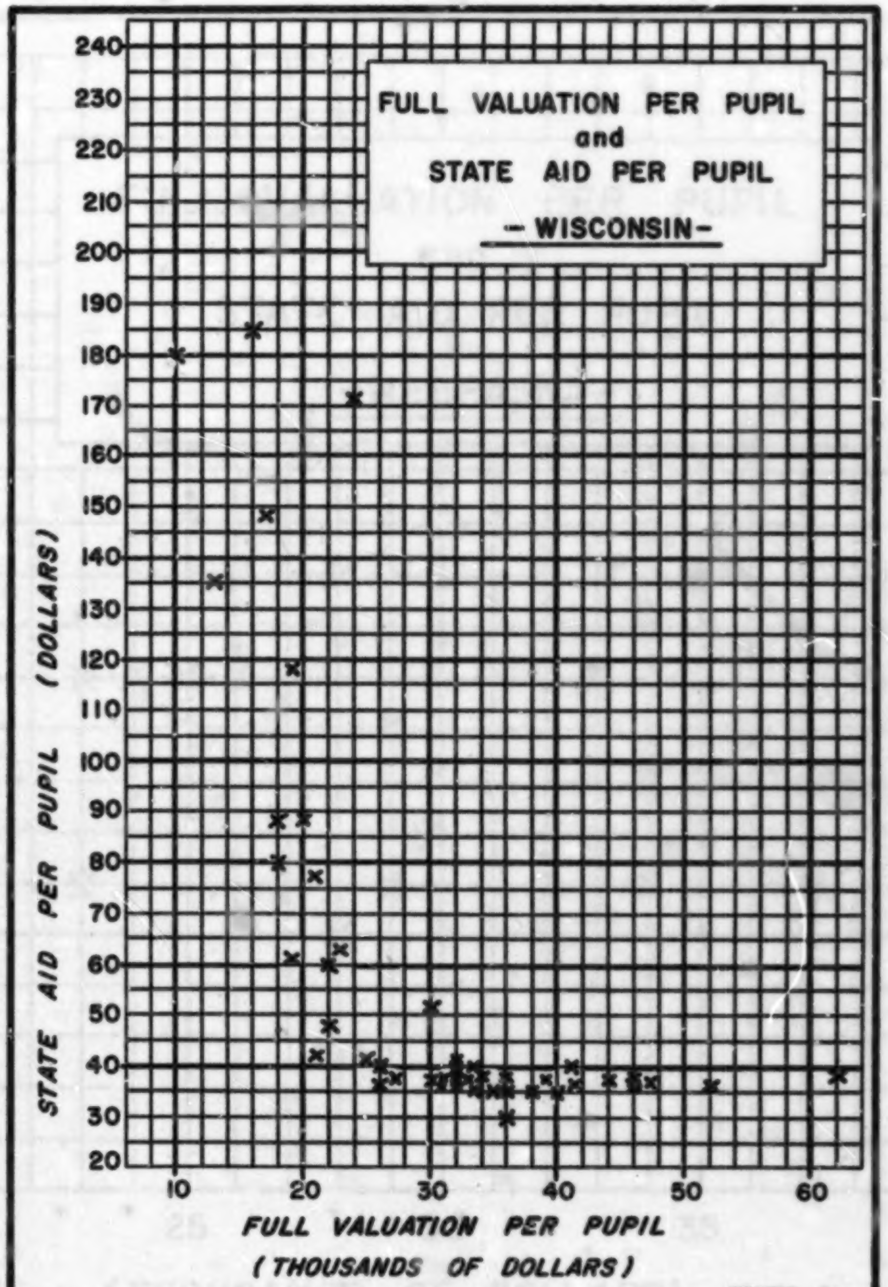

FIGURE 1D

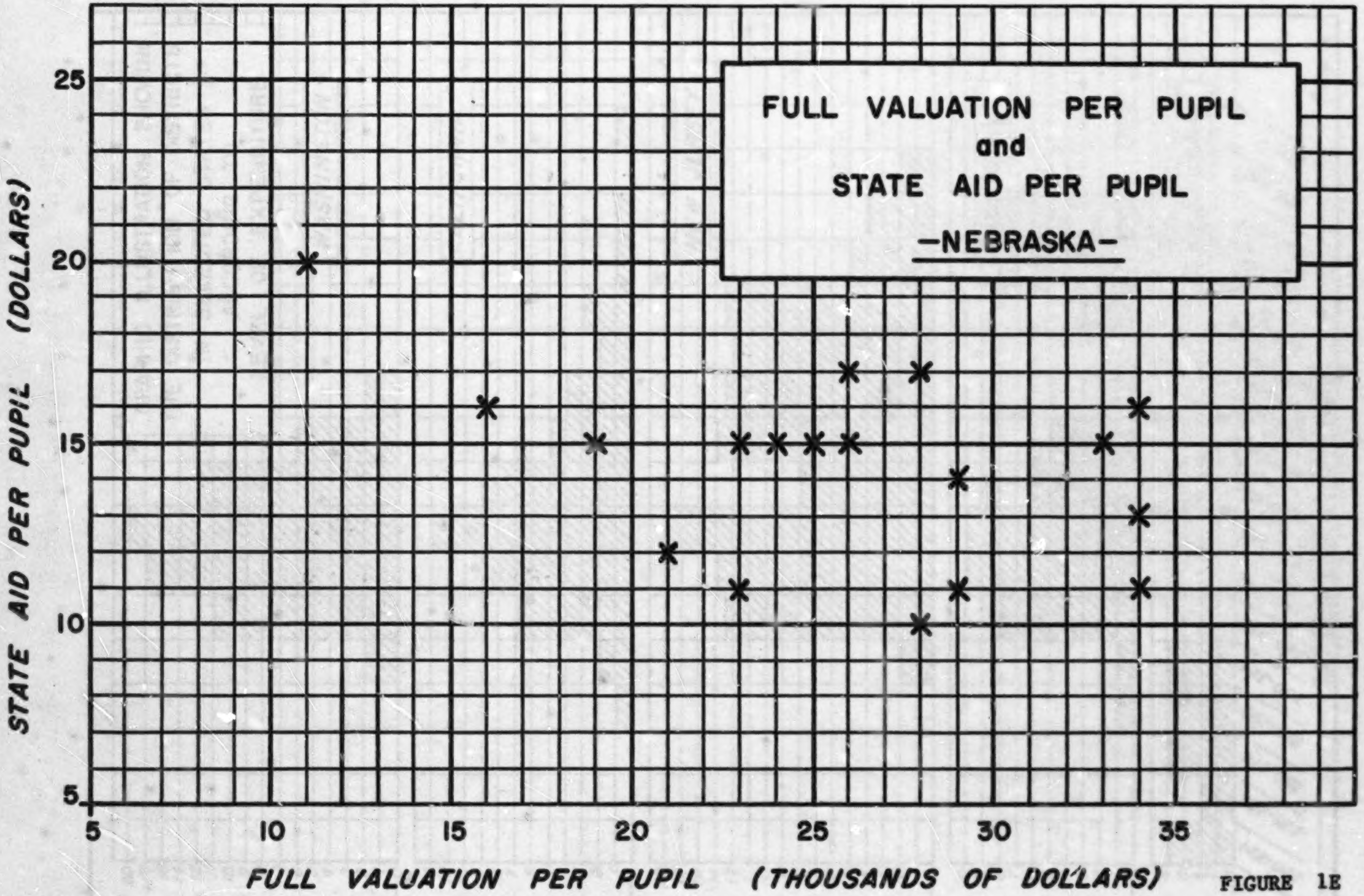
FULL VALUATION PER PUPIL
and
STATE AID PER PUPIL
—NEBRASKA—
STATE AID PER PUPIL (DOLLARS)
5
10
15
20
25
FULL VALUATION PER PUPIL (THOUSANDS OF DOLLARS)
5
10
15
20
25
30
35

FIGURE 1E

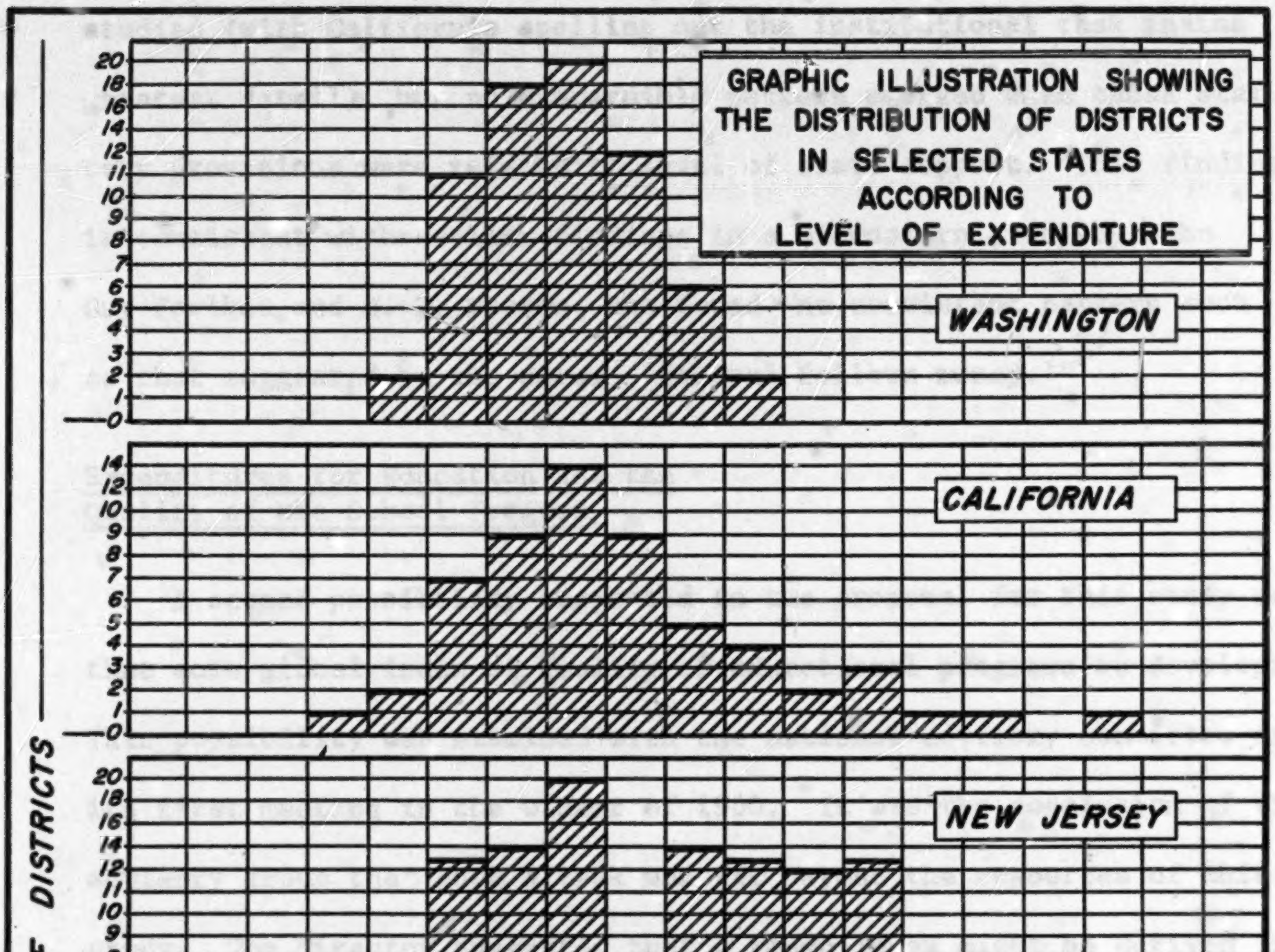
GRAPHIC ILLUSTRATION SHOWING THE DISTRIBUTION OF DISTRICTS IN SELECTED STATES ACCORDING TO LEVEL OF EXPENDITURE
WASHINGTON
CALIFORNIA
NEW JERSEY
WISCONSIN
NEBRASKA
NUMBER OF DISTRICTS
EXPENDITURE PER PUPIL
0 1 2 3 4 5 6 7 8 9 10 11 12 14 16 18 20
200-224
225-249
250-274
275-299
300-324
325-349
350-374
375-399
400-424
425-449
450-474
475-499
500-524
525-549
550-574
575-599
600-

FIGURE 2

the task of the school is prescribed by statutes in the five states studied (with California spelling out the institutional task in the greatest detail), but no discernible pattern emerged when these statutory provisions were related to level of state support. This finding is consistent with earlier findings in a midwestern study by John Guy Fowlkes and G. E. Watson, who found "no consistent pattern such as that suggested by the phrase 'control follows money.'"[4/]

Expenditures for Education and the Quality of the School Program

A second possibility suggested in the proposal for this study was that some global index of quality of educational programs be developed. This possibility was examined with the national advisory committee at its first meeting in the winter of 1960. It was the conclusion of this advisory group that such a task was far beyond the resources of this study. The director suggested that a rough index might be derived from rankings of school districts on a quality continuum by officials of state departments of education who were familiar with local district programs, but the committee's reaction was negative. After further discussion with the chief state school officers involved, who also reacted negatively to the suggestion, the idea was abandoned. The study

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[4/] John Guy Fowlkes and G. E. Watson, School Finance and Local Planning (Chicago: The Midwest Administration Center, 1957) p. 33.

highlights again, however, the need for an independent criterion for appraising program of quality. Fowlkes and Watson used the state education department rating, and succinctly stated the values problem.[5/] The difficulty with this approach (aside from the subjective aspect) is that state department officials may vary in their judgments only slightly less than local officials, because, like local officials, they will tend to reflect the values characteristic of the larger community in which they operate. Clearly these values vary from state to state.

Effect of Non-Tax-Supported Schools on Expenditures for Public Education

We proposed to examine the possible effects of non-tax-supported schools on allocations to the support of public education. The data was generally inadequate or unavailable at the local district level; however, private and parochial enrollments in the five states were compared to expenditures for public schools to see if a relationship

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[5/] Local school administrators and citizens in the communities studied tended to believe that the quality of their school programs was considerably higher than did the staff members of the department (ibid., p. 82).

between the two could be found. The results were inconclusive.[6] However, an interaction effect was apparent in the data, which led us to hypothesize two processes in operation, with opposite effects: where large enrollments in non-tax-supported schools were found, greater resources were available through the voting mechanism for support of public schools, but under such circumstances the number of votes available to make the allocations may be less. A satisfactory study of the relationship between non-tax-supported schools and public education expenditures would require data from local school districts not obtainable owing to the size of our staff and our limited finances.

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[6] The following table indicates the actual and relative magnitudes of non-public school enrollments in the five states. It will be noted that there is no clear relationship between these figures and the levels of expenditures among the states (which are listed in order of level of expenditure).

(1) State	(2) Enrollment in Private Elementary and Secondary Schools (1956)[a]	(3) Column (2) as a Percent of Total Population of Ages 5-17[b]
New Jersey	250,670	21.7
California	261,900	9.0
Wisconsin	194,210	22.1
Washington	41,130	6.7
Nebraska	40,500	12.7

[a] United States Bureau of the Census, Statistical Abstracts, 1959 (Washington, D.C.: U. S. Government Printing Office), p. 121, Table 155.

[b] United States Bureau of the Census, Statistical Abstracts, 1959 (Washington, D.C.: U. S. Government Printing Office), p. 10, Table 6 (for population, age 5-17).

Fiscal Independence vs. Dependence

Among the institutional factors that may have some effect on the level of expenditures for education in the local school district are the procedures for school budget review and approval. The common alternative arrangements are fiscal independence, with budgets approved within the framework of the school district, and fiscal dependence, with budgets subject to approval of some authority outside the district, usually the municipal government. The alternative arrangements for fiscal dependence and independence have received much attention in the literature of both school finance and public administration. Specialists in school finance tend to favor fiscal independence on the grounds that it is consistent with the tenets of democracy and that since education is the function of the state, it does not fall under the jurisdiction of municipal or city governments. The authorities in public administration generally look unfavorably on the separation of decisions governing budgetary allocations to education from those governing allocations to other locally provided services. They argue that a unified decision-making procedure results in better adjustment of resource allocation to demand.

Studies of the effects of fiscal dependence and independence on local district resource allocation to education have yielded inconclusive evidence. C. W. Frasier found that the fiscally independent districts were significantly more efficient in terms of pupil holding power, total expenditures per pupil, and expenditures for teachers' salaries. [7]

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[7] C. W. Frasier, The Control of City School Finances (Milwaukee: Bruce Publishing Co., 1927).

J. R. McGaughy, in a study of 377 cities, found that independent school districts made a greater tax effort and spent significantly more for "general control expense" per pupil than did the dependent districts, but that dependent districts made significantly greater expenditures for instructional services and teachers' salaries.[8] H. B. Woodward made an analysis of educational expenditures in 85 cities with populations between 100,000 and 1,000,000 during the period 1929-44. He found that fiscally dependent districts spent about 4 percent more than fiscally independent districts.[9] The exploratory effort made in this study to analyze this vexing problem also is inconclusive in its results.

Two states in the sample used in this study have fiscally dependent and independent school districts - New Jersey and Wisconsin. In New Jersey there are two kinds of school districts, one governed by New Jersey statutes Chapter VI, and the other by Chapter VII. In those districts governed by Chapter VI, generally found in the cities, the school budget, although drawn up by the mayor-appointed school board, is subject to the approval of the board of school estimate, a body composed of the mayor, two school board members, and two members of the city council. In Chapter VII districts, the school board is elected, and the school budget is approved by the voters. The first type of district is generally classified as dependent, the second, as independent.

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[8] J. R. McGaughy, The Fiscal Administration of City School Systems (New York: The Education Finance Inquiry Commission, 1924), Vol. V.

[9] H. B. Woodward, "The Effect of Fiscal Control on Current School Expenditures," doctoral dissertation, Teachers College, Columbia University, New York, 1948. Cited in P. Mort, et. al., Public School Finance (New York: McGraw-Hill, 1960), pp. 67-68.

In Wisconsin the city school districts are fiscally dependent. In some districts of this type the school board is elected by voters, in others it is appointed by the mayor or the city council. Some of these districts are coterminous with municipalities, others are not. In the year studied, the school budget was subject to the approval of the city council or commission in districts coterminous with cities. In districts including territory outside the cities, the chairmen and presidents of the towns and villages included in the school district participated in budget approval. Each of the town chairmen, village presidents, and members of the city council or commission had one vote for every $200,000 of equalized valuation of the school district which was within his municipality. In the fiscally independent districts of Wisconsin the school board is elected by the voters and the school budget is subject to voter approval.

Table 8 indicates the differences in the mean expenditures per pupil and in the mean local property tax rates between fiscally dependent and independent school districts in these two states. In New Jersey the dependent districts appear to make a greater tax effort and spend more per pupil than do the independent districts. In Wisconsin the reverse is true. It is interesting to note the similarity in the means for per pupil expenditures and tax rates, and in the standard deviations for the fiscally independent districts in Wisconsin and

New Jersey. The differences in expenditures and tax efforts between the dependent and independent districts within each state, and the differences between the dependent districts of the two states, may be a result of (1) differences in line-item expenditures such as transportation; (2) differences in wealth and demographic characteristics that influence the school budget as a whole; and (3) differences in the procedures for reviewing and approving the budget; or (4) a combination of all of these factors.

Table 8

Means and standard deviations for expenditures per pupil and local property tax rates for selected fiscally dependent and independent school districts in Wisconsin and New Jersey.*

State	Number	Per Pupil Expenditure		Local Tax Rate	
		Mean	S.D.	Mean	S.D.
New Jersey					
Dependent	35	$ 464	65	$ 12.19	3.75
Independent	79	421	66	10.93	2.22
Wisconsin					
Dependent	34	384	49	9.47	1.74
Independent	12	423	88	10.31	2.20

* It was found that 7 districts in the New Jersey sample had boundaries not coterminous with municipal district boundaries. These were eliminated for purposes of this analysis because some of the data used were applicable only to municipal districts. Differences between mean expenditure and levy rates in New Jersey are significant at the .05 and .1 levels respectively. In Wisconsin neither difference is significant at the .1 level.

Differences in transportation do not account for the differences in total expenditures between the fiscally dependent and independent districts. In New Jersey, the mean per pupil expenditures for transportation were $8.55 for fiscally independent and $3.74 for the dependent school districts.[10/] In Wisconsin, the dependent districts had a mean expenditure for transportation of $8.11 and the independent districts $8.14.

Toward eliminating the effects of wealth and demographic characteristics on expenditures, the dependent and independent districts were paired on the basis of a number of selected factors, as shown in Tables 9 and 10. The tables compare the mean expenditures per pupil and mean local property tax rates on equalized valuation for these two types of district in New Jersey and Wisconsin.

The striking feature in both these tables is the consistency of the relationships between fiscally dependent and independent districts within each state. In New Jersey, the mean expenditures per pupil and mean local tax rates are (with one exception) higher in dependent districts regardless of the factor used in pairing them with independent districts. In Wisconsin, the fiscally independent districts seem to spend more per pupil and make a greater tax effort than do the dependent districts. It is interesting that when paired on the basis

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[10/] In a non-random sample of New Jersey school districts, it was found that fiscally dependent districts make greater expenditures per pupil for every line-item in the budget, and notably for teachers' salaries, than do the fiscally independent districts.

Table 9

Mean expenditures per pupil and property tax rates in fiscally dependent and independent school districts in New Jersey paired on the basis of selected factors[a/]

Basis of Pairs	Number of Pairs	Expenditures per Pupil		Local Tax Rates (in mills)	
		Depend.	Independ.	Depend.	Independ.
Equalized Valuation per Pupil	28	$ 445	$ 425	12.8	11.1
Per Capita Income	29	469	408	12.1	10.9
Number of Pupils in ADA	21	454	399	11.1	10.9
Population Density[b/]	23	447	430	11.1	10.7
Population Increase 1950-60[c/]	20	463	419	10.7	12.2
Per Household Income and Valuation per Pupil	28	476	407	12.9	10.7
Resident ADA as Percent of Population	18	462	436	11.4	9.9

[a/] *The tolerance between the pairs are as follows:*
for equalized valuation per pupil, $1,000;
for per capita income, $100;
for number of pupils in ADA, 200 pupils;
for population density, 500 per square mile;
for population increase, 3 percent;
for resident ADA as percent of population (1960), 1 percent.

[b/] New Jersey Education Association, Research Division, "Salary and Economic Status of the New Jersey Teacher," The Association, Bulletin No. 59-6, 1959. Table 29, pp. 40-41, of this Bulletin gives estimates for per capita and per household income after federal, state, and local taxes for selected New Jersey cities, 1958. These estimates are cited from Sales Management, Survey of Buying Power, 1959. The reliability of this Survey has been well established by the U. S. Census Bureau.

[c/] The population data used here were taken from the Bureau of Census preliminary census report, Population Report: New Jersey, 1960.

of equalized valuation, there is only a slight difference in tax effort between the independent and dependent districts in Wisconsin. The differences in mean expenditures per pupil are the result of differences in state aid. The independent districts receive a mean of $83 per pupil in state aid; the dependent districts receive $51. This difference perhaps results from the fact that higher local rates may increase state aid under the Wisconsin support system.

Table 10

Mean expenditures per pupil and property tax rates in fiscally dependent and independent school districts in Wisconsin paired on the basis of selected factors

Basis of Pairs	Number	Expenditures per Pupil		Local Tax Rates	
		Depend.	Independ.	Depend.	Independ.
Equalized Valuation Per Pupil	11	$ 389	$ 429	$ 10.0	$ 10.2
State Aid Per Pupil	10	386	437	9.7	10.5
Number of Pupils Attending Daily	11	369	426	9.2	10.6

A selected number of school districts in New Jersey were divided into categories on the basis of metropolitan status.[11/] Three categories of

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[11/] O. F. Nolting and D. S. Arnold, The Municipal Year Book: 1959 (Chicago: International City Managers' Association, 1959), Table VI, pp. 89-137.

suburbs were found to be useful: (1) the dormitory city, in which most residents are engaged in manufacturing and trade in another city; (2) the balanced city, in which the number of people working outside the city in manufacturing and trade approximates the number of city residents who are engaged in these industries; and (3) the employing city, in which more people work within the city in manufacturing and trade than are in the resident labor force for these industries. There were 32 dormitory cities, with a mean expenditure per pupil of $440, 8 balanced cities with a mean expenditure of $472, and 15 employing cities with a mean expenditure of $465. The mean expenditures per pupil in the six fiscally dependent dormitory cities was $516; for the 26 fiscally independent dormitory cities, $422. The mean expenditures for the fiscally dependent employing city was $490; for the independent employing city $437. There were no fiscally independent balanced city districts.

The data reported above demonstrate a consistent relationship in mean expenditures and local tax rates between fiscally dependent and independent districts in both states. This consistency is evidenced in spite of the fact that the factors used in pairing are not equally related to expenditures in the two categories of district. Table 11 explores the relationship between the factors used in pairing districts and expenditures for education in Wisconsin and New Jersey.

Table 11

Zero order correlations of expenditures per pupil and selected variables in fiscally dependent and independent school districts in Wisconsin and New Jersey

Selected Variables	Expenditures Per Pupil			
	Dependent Districts		Independent Districts	
	New Jersey	Wisconsin	New Jersey	Wisconsin
	N=34	N=34	N=51	N=12
Equalized Valuation per Pupil	.154	.611	.295	.675
Per Capita Income (after taxes)	.610	*	.910	*
Number Pupils in ADA	.121	.315	-.268	-.127
Population Density	.364	*	-.005	*
Per Household Income (after taxes)	.580	*	.583	*
Res. ADA as Percent of Population, 1960	-.428	*	-.255	*
State Aid per Pupil	-.241	-.076	-.565	-.259

*Data not available on the school district basis.

From these correlations it appears that wealth factors, per capita income, per household income, and property valuations tend to influence expenditures more in fiscally independent districts than in the dependent ones. This relationship seems to obtain in both states. One explanation for this phenomenon may be that in fiscally dependent districts, budgetary decisions reflect more extensive balancing of values for other services of government against educational values.

The effect on expenditure level and tax effort of different structures and procedures for reviewing and approving school budgets appears to be considerable in both states. Although a more extensive and refined approach to the problem of fiscal dependence and independence is needed before we can make generalizations, this study does point out the importance of considering the various types of fiscal dependence. The composition of the budget-reviewing body may account, in large part, for the differences in mean expenditures per pupil and tax effort between the fiscally dependent districts in New Jersey and Wisconsin.

Socio-Economic Factors

Categorization of School Districts

In the search for suitable analytic tools, considerable attention was given to the development of categories of school districts possessing a sufficient degree of internal homogeneity to allow comparisons to be made among them. Some progress was made in developing categories based on total ADA, assessment per pupil, and expenditures per pupil. A further refinement was based on the categorization of cities of 25,000 population and over, developed by Harvey Brazer.[13]

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[13] Harvey E. Brazer, City Expenditures in the United States (New York: National Bureau for Economic Research, Inc., Occasional Paper 6, 1959). Brazer's categories were the following: (1) Major Metropolitan Core Cities(2) Minor Metropolitan Core Cities(3) High Income Residential Suburbs (4) Low Income Residential Suburbs (5) Industrial Suburbs (6) Independent Cities (7) Resort City.

Table 12 summarizes the comparison that was developed on the basis of Brazer's categories of cities. It is apparent that the industrial suburbs in our sample make the highest per pupil expenditures, although they do not have the highest assessments per pupil. Major metropolitan cities and industrial suburbs provide the greatest effort, in terms of the levy rate required for current expense.

Table 12

Full valuation per pupil, expenditure per pupil, and required levy rate, according to classification of city (Summary for Five States)

Class of City	Number of Cities in Class	Mean Full Valuation Per Pupil (M)	Mean Expenditure Per Pupil	Mean Required Levy Rate (in mills)
1 Major Metro Core	10	$ 36	$405	11.5
2 Minor Metro Core	12	31	382	6.9
3 High Income Suburb	3	45	418	6.8
4 Low Income Suburb	14	38	416	6.4
5 Industrial Suburb	112	35	438	10.0
6 Independent	92	27	356	7.2
7 Resort	1	47	382	6.8

Some attention was given to the use of demographic data available in census reports. Owing to the unavailability of 1960 census material at the time of writing this report, this study was of an exploratory nature. On logical grounds, a number of factors were selected as being worth further study. These factors may prove useful in acting as indicators of the aspirations of a community with regard to the education of its young people, and will be explored further in the next phase of our study.

Intra-district Expenditures

A mathematical analysis was made of the expenditures within the 59 unified school districts in our California sample, for the following reasons. First, we desired to determine which line-items of the budget are relatively fixed, and which are subject to local decision. Second, we wished to study the effect of ability to support education on the distribution of expenditures among line-items. Third, we were interested in gaining some insight into factors other than financial ability that influence the distribution of the funds of the local district.[14]

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[14] The following is a brief definition of terms and statement of mathematical procedures used in the development of this section of the report.

(a) Flexibility of a line-item refers to the relative variability of a given line-item among the districts in the sample. It is calculated by means of the ratio $\sigma_x/\bar{x}$. In other words, it is the ratio of the standard deviation of a given line-item to the mean among districts of that line-item. It corresponds to the term "coefficient of variation."

(b) The statistical treatment consisted of the following calculations:

1. Standard deviation and mean of the amount per pupil devoted to each line item.
2. Zero order Pearson product-moment correlations between each line-item and the following variables: full valuation per pupil, total expenditure per pupil for current operations, district ADA, percent rate of growth of district ADA over a five-year period, and total of state plus federal aid per pupil.
3. Multiple correlation of amount per pupil devoted to each line-item treated as a dependent variable with those variables in "2" above which proved to be related to that line item.

Although considerable variation was found among districts with respect to each expenditure item, the following items showed the greatest degree of flexibility: community services, food services, and pupil transportation. Expenditures for plant operation and certificated salaries were relatively stable, as were total expenditures per pupil in average daily attendance.

It would appear that teachers' salaries are determined to a considerable degree by factors beyond the control of the local school board. The school boards appear to enjoy a high degree of independence in the allocation of funds for community services and food services. On the other hand, it must be pointed out that these items account for a relatively small share of the total budget, as compared with the more stable items of plant operation and certificated salaries. (See Appendix C for further evidences of a minor role for local decisions on allocations.)

It was hypothesized that the level of expenditures for the more flexible budget items would be related to the full valuation per pupil in the school district. Specifically, it was expected that the wealthy districts would tend to spend larger sums of money for such items as food services and community services. Our findings do not, however, bear out this hypothesis. In fact, the less flexible items are related more closely to full valuation per pupil than the more flexible items. One concludes that flexibility must be explained by other factors than the financial ability of a district.

Table 13

Flexibility of line-item expenditures and their relation to full valuation per pupil

Budget Item	Mean Per Pupil Expenditure	Standard Deviation	Flexibility in Percent	Product-Moment Correlation of Expenditure Per Pupil with Full Value Per Pupil
Community Services	$ 3.41	$ 4.21	123.5	.08
Food Services	1.41	1.66	117.7	.14
Transportation	9.59	9.50	99.1	-.02
Plant Maintenance	16.73	8.15	48.7	.85
Auxiliary Services	8.88	4.10	46.2	.44
Non-Teaching Salary	13.39	4.63	34.6	.58
Administration	16.01	5.20	32.5	.51
Other Instruction	18.50	5.50	29.7	.40
Fixed Charges	17.34	4.40	25.4	.58
Plant Operation	41.63	8.02	19.3	.58
Total Current Expense	406.17	61.16	15.1	.83
Teacher Salaries	264.84	32.91	12.4	.79

The method of multiple correlation was used to attempt to specify these relationships. The analysis indicated, first, that the effects of sparsity have not been completely removed. There is a negative relationship between the expenditures per pupil for administrative costs and the average daily attendance of the school district. Pupil transportation, an expense which is obviously related to sparsity, also showed a negative correlation with the ADA. Other line-items showed no relationship with the total district attendance.

The method of multiple correlation was also used to study further the relationship between valuation per pupil and the expenditure for a given line-item. The item "administration cost" was correlated with valuation per pupil in two equations, with total expenditures per pupil introduced as an additional independent variable in the second equation. The effect was to decrease considerably the relationship between administration cost and assessed valuation, and to increase the coefficient of total determination. This would appear to indicate that administration cost is related to valuation through the effect of level of valuation on total expenditure. Following this lead, we introduced the item "total expenditure per pupil" in other equations, and it was found to be the one factor that is most closely related to the amount per pupil devoted to each line-item. Our study would appear to indicate that the wealth of the district affects most directly the total amount spent per pupil, and this in turn, affects the size of the line-items, as higher expenditures per pupil are associated with larger expenditures for each budget item.

The relationship between total expenditures per pupil and a line-item amount is closest in the case of expenditures for certificated salaries. The relationship between total expenditures per pupil and non-certificated salaries and other auxiliary services is less clear. It would appear that these items are determined to a large degree by the peculiar needs and preferences of each locality.

It was hypothesized that the rate of growth of the district would affect the internal distribution of funds. Specifically, it was felt that rapidly growing districts may be forced to spend greater sums for administration, in order to supervise present expansion and to plan for the future. This hypothesis received no support from our findings, and the rate of expansion of a district does not appear to be related to its distribution of funds for current operation. The effect of growth rate on capital and debt expenditures, which might be expected to be significant, was not examined.

The relationship between the total of state and federal aid per pupil in each district and the line-item expenditures also was studied. State aid is negatively related to total expenditures. It is negatively related to the district expenditures for certificated salaries per pupil. This, of course, is a result of the distribution of state funds in inverse proportion to the property valuation in the district. Non-certificated salaries and other auxiliary services also show a negative correlation with the level of state plus federal funds received.

To summarize, total expenditures per pupil are relatively stable, when compared with individual line-items. Their level is probably determined in large part by state-wide concensus, implemented through legislation and/or constitutional provisions. Sub-items show varying degrees of flexibility. The cost per pupil for certificated salaries is also relatively stable, owing in part to teacher mobility, to extensive exchange of information on teacher salaries, and to minimum salary provision in state laws - all factors not subject to local control.

On the other hand, costs of community services and food services are, apparently, subject to local option, and are relatively flexible. Their flexibility does not appear to be related to the financial ability of the district. Other factors, such as the total district attendance, bear some demonstrable relationship to certain budget items. Nevertheless, in most cases the amount spent for a given budget item seems to depend most directly upon the total level of expenditure per pupil, which in turn is related to the district's wealth.[15]

Income and Educational Expenditures Over Time

The research on which this report is based is cross-sectional. Nevertheless, in view of the dynamic nature of American education and the American economy, we felt compelled to give attention to some of those factors which affect educational expenditures over time. Accordingly we considered briefly some long-run relationships between educational expenditures and income, and some relationships between educational expenditures and economic growth.

The level of educational expenditures has, over the years, responded to the condition of the economy. In the 1930's, both national income and education suffered the effects of the depression. During the war, limitations on expenditure kept school costs nearly constant, while income rose rapidly. In the immediate postwar years, the backlog of needs that had built up resulted in rapidly rising expenditures. There followed a period from 1946 to the present day of simultaneously increasing income and school costs.

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[15] The findings of this section substantiate those of an earlier (unpublished) paper by Mrs. Glorianne Rice, titled "An Examination of Elementary School District Budgets, with Emphasis on the Elasticity of Demand for the Various Budget Expenditures" (Stanford School Finance Study Field Paper No. 7, 1960).

Figure 3 illustrates graphically the relationship outlined in the preceding paragraph. Only one state, California, has been charted, since its pattern is representative of the five states.[16] Figure 4 indicates for the five states the expenditure/income ratio during this period. While some differences are apparent, the chart is noteworthy for the degree of similarity among states which differ widely by wealth, by region, and by institutional arrangements.

While the relationship between educational expenditures and income has fluctuated with the condition of the economy, the postwar (1946-58) relationship is almost linear in all five states. This being the case, it is subject to simple mathematical treatment, by means of "least squares" regression equations.

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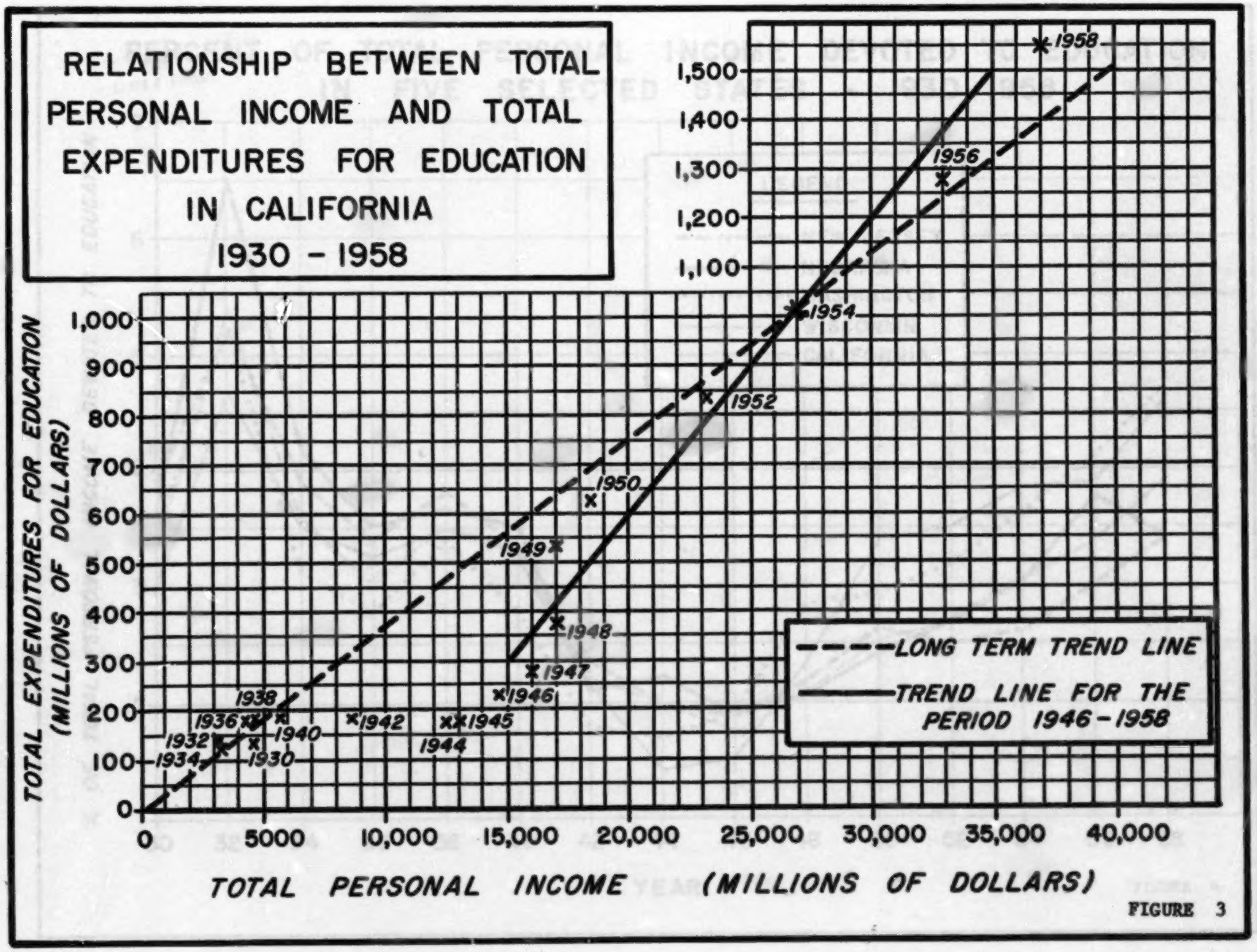
[16] Figure 3 also provides a rough comparison between long-term and short-term trends in educational expenditures in one state. The long-term regression line shows the income-educational expenditure relationship for the years 1930, 1932, 1934, 1936, 1938, 1940, 1950, 1952, 1954, 1956. The short-term line shows the same relationship for the years 1946-58. The equations of the lines are respectively:

$$E = -22 \text{ million} + .038\ Y$$

$$E = -601 \text{ million} + .060\ Y$$



RELATIONSHIP BETWEEN TOTAL PERSONAL INCOME AND TOTAL EXPENDITURES FOR EDUCATION IN CALIFORNIA
1930 - 1958

FIGURE 3

PERCENT OF TOTAL PERSONAL INCOME DEVOTED TO EDUCATION IN FIVE SELECTED STATES - 1930-1958

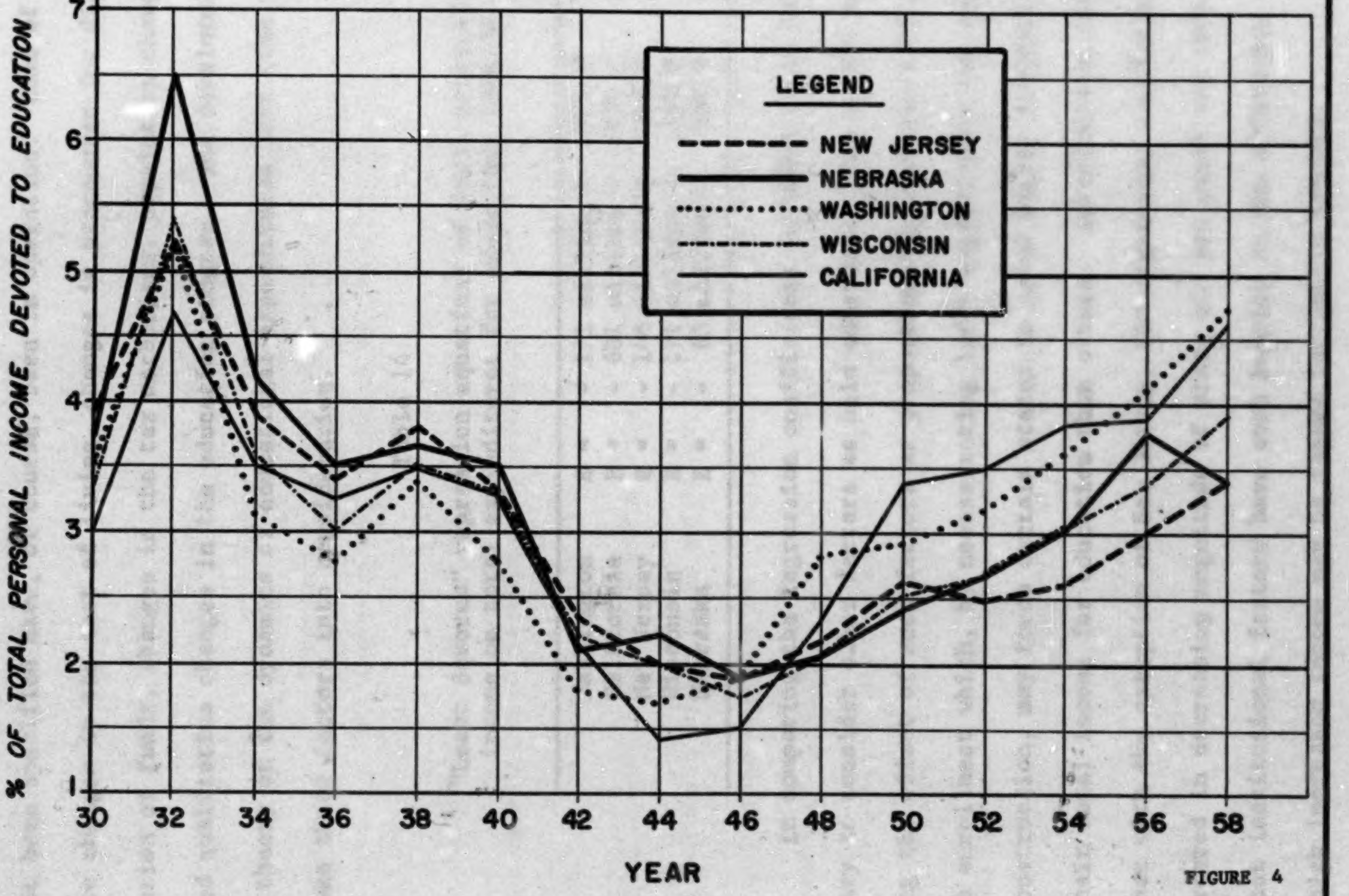


FIGURE 4

In the consideration of the long-run relationship between educational expenditures and income, a number of other factors which have not been specified have, of course, been in operation. Some of these are changes in the cost of living, changes in procedures for distribution of funds, changes in the tax mechanisms, population changes, and qualitative changes in the education program. The development of a theory of the dynamics of educational expenditures over time must take these factors into consideration.

Table 14

"Least Squares" regression equations of total personal income on total expenditures for education, 1946-58

Washington	$E = -171 \text{ million} + .073\, Y$
California	$E = -601 \text{ million} + .060\, Y$
New Jersey	$E = -146 \text{ million} + .042\, Y$
Wisconsin	$E = -171 \text{ million} + .059\, Y$
Nebraska	$E = -63 \text{ million} + .058\, Y$

In comparing the regression coefficients in Table 14 it is necessary to consider other factors as held constant. Thus we are neglecting the effect of such factors as proportionally high rates of growth in enrollment which, by necessitating large expenditures for capital construction, may force certain states to spend higher proportions of their total income for education than others. Nevertheless, the fact that with the exception of New Jersey, the regression coefficients are ordered in decreasing magnitude of state aid per pupil may indicate that institutional factors have some bearing on the efficiency with which increased income may be tapped for public schools.

Some thought has been given to the concept of education as assisting in the development of what has been called "human capital." Theodore Schultz defined this concept as follows:

> . . .it is capital that is embedded in the human agent. When it has become an integral part of a person, it cannot be bought or sold or treated as property under our institutions. It may be a form of capital, nevertheless, if it adds to the flow of the productive services that are of value to the economy. The principal hypothesis underlying this treatment of education is that some important increases in national income are a consequence of additions to the stock of this form of capital.[17]

A detailed study of the interrelationship between national income and the allocation of resources to education is beyond the bounds of this study. Suffice it to say that Theodore Schultz and other economists have established in the literature that judicious spending for education should result in an expansion of the economy of a nation. In a doctoral dissertation closely related to our study and closely related to this aspect of resource allocation, Edward E. Loveless found a high correlation (.79) between expenditures for education in 1926-30 and per capita income in 1950-54.[18] Correcting the expenditure figures for migration increased the correlation to .83. It is felt that further research in this vital area is essential and more is contemplated in the next phase of this study.

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[17] Theodore W. Schultz, Gross Capital Formation Represented by High School, College and University Education in the United States, 1900 to 1956 (The University of Chicago, A.E.R. Paper No. 5807, April 29, 1958).

[18] Edward E. Loveless "School Expenditures and Per Capita Income" Ed.D. Dissertation, Stanford University (Stanford, 1958).

The remaining sections of this report include four appendices. Appendix A reports in greater detail on the items of information developed for the tests for equality reported in Chapter Two, and discusses some of the problems involved in treating the data required, with special emphasis on property tax data. Appendix B includes some of the instruments used in gathering data. Appendix C reports a further analysis of the systems of support for education in the five states, and points to a need for revising downward estimates generally accepted as to the part played by local decisions in resource allocation in some of these states. Appendix D examines some data on tax loads in the five states resulting from all services of state and local government including education.

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APPENDIX A

Detail of development of items of information used in testing hypotheses discussed in Chapter Two, together with some discussion of problems encountered in the use of the data involved

Four items of information were required to test the four working hypotheses discussed in Chapter Two. These items were collected for each district under study. The descriptive terms for these items are defined in this section and the procedures used in developing them are described. The four items are: (1) the required levy rate; (2) the current expense per pupil; (3) the voluntary levy rate; and (4) the voluntary expenditure per pupil.

THE REQUIRED LEVY RATE

The term required levy rate as used in this study is a refinement of the term ad valorem rate as generally defined in property tax administration. In the administration of the property tax, the cost of a governmental service to be borne by a property-taxing district, expressed in dollars, is divided by the valuation of the taxing district, also expressed in dollars, yielding a quotient called a rate, expressed in mills. This rate is then multiplied by the valuation of each parcel of property in the taxing unit. The resulting product is the tax to be paid to the taxing unit by the owners of each parcel of property.

The required levy rate is obtained by dividing a district's net current expense by its equalized valuation of taxable property. These terms are discussed below.

Current Expense

The expenditures made by a school district during one school year are classified by the U. S. Office of Education[1/] as current expense, capital outlay, and debt service. Expenditures for capital outlay and debt service were not included in this study, partly because of the small number of states that take them into account in systems of state support, and partly because of the difficulty of allocating the proper amounts to a single year in a cross-section study.

"Current expense" as used in this study is limited to the "total current expense for full-time elementary and secondary day schools" (including summer schools), a sub-total of the expenditures class of current expense used by the U. S. Office of Education. Expenditures in the remaining sub-classes in that system of classifications, including community services and public adult and community college programs, are excluded from consideration in this study because of wide variations in incidence and support for these programs. The class of expenditures defined as current expense for purposes of this study includes the following subordinate accounts (again using U. S. Office

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[1/] Paul L. Reason, Emory M. Foster, and Robert F. Will, The Common Core of State Educational Information (Washington: U. S. Department of Health, Education and Welfare, 1953), pp. 61-76.

categories): (a) administration; (b) instruction; (c) other school services; (d) operation of plant; (e) maintenance of plant; and (f) fixed charges. While states vary somewhat in their classification of expenditures, the adjustment to these classes and sub-classes was readily made because these adjustments must be made annually by each state department for purposes of reporting to the U. S. Office of Education.

"Net current expense" is defined in this study as that portion of current expense which remains to be paid from local tax receipts after all other revenues applicable to current expense, such as federal aid, state aid, county aids, tuition transfers, and payments by pupils have been deducted. Further detail and tables on net current expense are presented in this Appendix, beginning on page 111.

Equalized Valuation

The equalized valuations of property are derived from assessed valuations. In each taxing district, an assessor (usually an elected official) estimates by appraisal the value of each parcel of property and records for each a value for tax purposes. The process of appraisal is intended to be objective, assigning equal assessments to parcels of equal value. Value for this purpose is usually defined as the price for which willing seller would sell the parcel to a willing buyer at arm's length (that is, without any ties of family or friendship, or any coercive factors entering into the transaction). The procedure is difficult to make objective, however, because the criterion of value, the sale price, is affected by assessment.[2/] In practice other factors intrude to reduce the objectivity of the process. Governmental units frequently classify property, and, either by law or by tacit agreement, adjust the assessments so that properties in one class are assessed at a different level than properties of the same value in another class. Some classes of property may be exempted entirely or in part from taxation. Such classifications implement governmental policy, which varies among states and may vary widely among units within states, favoring certain economic uses of property and discouraging others. Other subjective or value judgments affect the individual appraisals of assessors and create systematic differences in the level of assessments among assessment districts. Unquestionably, human errors play their part, but some variations that have the appearance of error are unavoidable. No matter how sound the judgment of an assessor on the assessment of a given parcel, the subsequent evaluation of his assessment in terms of the price in the sale of the parcel is affected by the quality of judgment shown by the buyer or by the seller, or by both.

State governments frequently seek ways to reduce the effects of variations in assessment practices. The concern of the state arises

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[2/] Thus, given the delicately balanced hypothetical transaction upon which assessment is based, the determination of the assessment becomes a new factor entering into the determination of price in any subsequent actual transaction. If the assessment resulted in taxes equal to the pure economic rent, the price of the property would sink to zero; if the assessment resulted in no taxes, the price of the parcel would rise to approach the level of its pure economic rent.

out of legislative responsibility (usually imposed by the constitution) to assure equitable distribution of tax burdens, or to assure equitable distribution of state benefits related by law to local taxable wealth, as in equalization programs for school support. The approaches used by the state to supervise and control assessment vary. They include statements of policy, preparation of advisory manuals, sales-ratio and other studies, supervision and adjustment of local assessments, and occasionally the reassessment of property by state officials.

All five states in this study place some responsibility for local assessments on an agency of state government. State tax authorities in all five states have devised some basis for determining a factor to be applied to locally determined assessed valuations of property that is intended to compensate for the effects of differing local governmental policy and the systematic biases of the local assessors. Equalized valuations of real property for New Jersey are derived from sales ratio studies. They are published[3/] and are used as a basis for distributing state school equalization aid. Wisconsin also uses equalized valuations as a basis for distribution of state school equalization funds.

[3/] State of New Jersey, Annual Report of the Division of Taxation in the Department of the Treasury for the Year 1959. Only real property values are corrected, personal property (about 14% of the aggregate assessments) being carried into the aggregate equalized valuation at the amount determined by the local assessors. Assessed values as a percent of equalized value (called true value by the New Jersey Division of Taxation) ranged from 7.62% to 110.75% among assessment districts. Mean county percentages of assessed to true values ranged from 13.6% to 52.1%, with a state mean of 27.86%.

The equalized valuations for Wisconsin districts were obtained from the records of the Wisconsin Department of Public Instruction. (See Table 1.) They are based on a combination of state supervision of assessments, periodic state reassessment, and application of economic indices and sales ratios to projection of trend lines from the base years in which state assessments are made.

California, Washington, and Nebraska did not use equalized valuations in the distribution of state aid in the year studied, and did not publish equalized valuations of school districts for that year.[4] The state tax authorities did provide correction factors, making possible the development of an equalized valuation for each district. In Nebraska the correction factor could be applied directly to published assessed valuations of school districts.[5] (See Table 2.) In California and Washington, however, direct application was not possible because the total assessed valuations of school districts as published combined state-assessed rolls with locally assessed rolls. Because the correction factors for these rolls were different, it was necessary to obtain the amounts of locally assessed valuations from

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[4] California began using equalized valuations in the distribution of state school equalization support in the 1960-61 school year, but these were assessed valuations adjusted to the state mean assessment ratio, which was 22.6% of full or true value as determined by the State Board of Equalization. Equalized valuations developed for this study were produced by raising assessed valuations to 100% of full or true value as estimated by state tax authorities.

[5] State of Nebraska, Sixty-First Nebraska Educational Directory, 1958-59 (Lincoln: Department of Education, 1959), Assessment ratios, with a state mean of 32.3% ranged from 16.2% to 40.0%.

APPENDIX - TABLE 1

Equalized Valuations, Current Expenditures, Average Daily Attendance, and Expenditures Per Pupil of Selected Wisconsin School Districts, 1958-59

County	District	Equalized Valuation (thousands)	A D A	Total Current Expense (thousands)	Current Expenditure Per ADA
Ashland	Ashland	29,621	1906	822	431
Barron	Rice Lake	29,735	1640	582	355
Brown	Green Bay	278,102	8323	3,289	395
Chippewa	ChippewaFalls	47,527	2685	837	312
Columbia	Portage	25,685	1566	511	326
Dane	Madison	614,419	6539	6,943	420
Dodge	Waupun	24,751	1269	502	395
	BeaverDam	50,411	1773	695	392
Douglas	Superior	91,819	5149	1,890	367
Dunn	Menomonie	22,744	1675	582	348
EauClaire	EauClaire	153,668	6446	2,512	390
Jackson	BlackRiverFalls	16,090	1575	564	358
Jefferson	Watertown	57,569	2010	689	343
	FortAtkinson	49,913	1667	625	375
Kenosha	Kenosha	294,654	9700	3,914	403
LaCrosse	LaCrosse	237,927	6930	2,683	387
Lincoln	Merrill	32,674	1690	611	361
Langlade	Antigo	27,436	1900	699	368
Manitowoc	Manitowoc	154,317	4321	1,798	416
Marathon	Wausau	146,482	5187	1,834	353
Milwaukee	Cudahy	104,056	2234	951	425
	Greenfield	55,177	2353	1,216	517
	Milwaukee	3,454,359	86667	33,079	382
	OakCreek	42,297	2009	895	446
	Shorewood	90,065	2075	1,261	608
	SouthMilwaukee	91,892	2326	1,002	431
	Wauwautosa	320,602	6987	3,493	500
	WestAllis	558,555	9284	4,866	524
	WhitefishBay	121,209	2962	1,636	552
Marinette	Marinette	44,156	2141	632	295
Monroe	Tomah	24,272	2035	680	334
Outagamie	Appleton	222,563	6700	2,461	367
Racine	Racine	413,647	12736	4,852	381
Rock	Janesville	159,067	5465	1,834	338
	Beloit	175,281	6826	2,378	348
Shawano	Shawano	44,772	2300	914	397
Sauk	Baraboo	26,712	1553	511	329
Sheboygan	Sheboygan	188,704	6562	2,646	403
Waukesha	Oconomowoc	41,223	1794	784	437
	MenomoneeFalls	46,396	2147	796	371
	Waukesha	149,494	5466	2,030	371
Winnebago	Menasha	93,143	1799	748	416
	Neenah	92,878	3089	1,063	344
	Oshkosh	183,573	6586	2,523	383
Wood	Marshfield	50,805	1830	733	400
	WisconsinRapids	80,002	2282	806	353

APPENDIX TABLE 2

Factors For Correcting Assessed to Equalized Valuations; Current Expense; Average Daily Attendance; and Expenditure Per Pupil of Selected Nebraska School Districts, 1958-59

District	Assessment Sales Ratio	Full Valuation (thousands)	Current Expense	ADA	Expense Per ADA
Alliance	.23	44,520	522,387	1660	315
Beatrice	.33	54,941	642,651	2247	286
Bellevue	.27	33,218	714,106	2938	243
Columbus	.29	61,681	447,605	2018	222
Fremont	.32	92,269	770,080	3476	222
Grand Island	.33	110,159	1,334,776	4972	268
Hastings	.32	94,865	1,211,901	3778	321
Kearney	.30	56,247	643,238	2369	272
Lincoln	.24	691,485	6,835,078	21360	320
McCook	.30	36,185	496,306	1797	276
Norfolk	.32	58,572	523,739	2177	241
Nebraska City	.29	31,189	410,187	1430	287
North Platte	.32	83,507	1,021,022	4591	222
Omaha	.32	1,387,522	11,056,639	41633	266
Scottsbluff	.29	83,619	921,942	3517	262
Sidney	.29	47,740	568,366	1828	311
South Sioux City	.32	23,511	341,376	1548	221
Westside Community	.32	144,738	1,262,182	4314	293

each county in Washington and California. These data were obtained by questionnaires (See Appendix B) mailed to the county superintendents of schools. When the breakdown of the total roll for each district was received, the county assessment ratio was applied to the local portion to produce a local equalized valuation; the state-assessed portion was doubled in California, because the properties so assessed are uniformly assessed at 50 percent of full value. In Washington both rolls were corrected by factors reported for each county by the tax commission. The two corrected rolls for each school district were then re-combined in both states to form an equalized valuation for each school district. The detail of these adjustments are shown in Table 3 for California and Table 4 for Washington.

The purpose of this procedure (i.e., the application of a correction factor to the total assessed value of an assessing district) was to equalize differences among assessment districts. This procedure does not correct, but can only magnify, differences within the assessing district resulting from variations in practices of the local assessor. These variations can be presumed to be smallest in states with the closest state supervision of the assessment process, but may be very large indeed in some assessment districts. A California study found ratios of assessed values of real property to sales values within a given county ranging from less than 0.1% to over 100%[6/] on the 1957 rolls. For the county cited, the median was located at 23%, the

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[6/] Joint Interim Committee on Assessment Practices, Staff and Consultant Reports to the Committee, February, 1959 (Sacramento: the Committee), Table 3, p. 209.

APPENDIX TABLE 3

Adjustment of Assessed Valuations Used To Distribute 1958-59 School Aid to Full Equalized Valuations For Selected California School Districts
(State assessed roll correction factor is .50 for all districts)

District	State Assessed Roll (thousands)	Local Secured Roll (thousands)	Unsecured Roll (thousands)	Local Correction Factor	Equalized Valuation (thousands)
Alameda County					
Alameda Un.	3,706	46,441	6,942	.238	231,709
Albany Un.	3,822	13,223	1,390	.238	69,047
Berkeley Un.	12,485	125,227	15,325	.238	615,526
OaklandCity Un.	84,948	444,397	66,463	.238	2,316,367
Piedmont Un.	1,102	19,919	134	.238	86,458
SanLeandro C.Un.	10,100	83,338	12,563	.238	423,144
Butte County					
Paradise Un.	3,570	9,164	353	.209	52,679
Contra Costa County					
Antioch-LiveOakUn.	40,301	40,528	1,643	.228	265,564
MtDiabloCity Un.	15,118	102,959	4,482	.228	501,466
Pittsburg Un.	41,413	52,462	1,918	.228	321,338
Fresno County					
FresnoCity Un.	33,608	193,441	23,935	.215	966,942
Humboldt County					
So. Humboldt Un.	1,874	7,488	1,189	.224	42,485
Kern County					
Muroc Unified	3,105	8,106	835	.225	45,947
Los Angeles County					
Arcadia Un.	4,780	75,053	5,100	.233	353,568
Bellflower Un.	4,347	40,758	4,128	.233	201,334
BeverleyHills Un.	9,540	146,023	17,260	.233	719,863
Bonita Un.	2,899	12,765	897	.233	64,433
Burbank Un.	10,126	237,639	45,222	.233	1,234,247
Claremont Un.	3,164	19,435	917	.233	93,677
Culver City Un.	7,488	61,283	14,906	.233	341,968
ElSegundo Un.	18,960	58,827	5,058	.233	312,103
Glendale Un.	15,413	178,144	26,353	.233	908,497
InglewoodCity Un.	9,956	105,597	12,639	.233	527,366
LongBeach Un.	92,506	475,769	108,183	.233	2,691,241
Lynwood Un.	2,939	33,457	5,582	.233	173,429
Montebello Un.	33,740	221,940	58,676	.233	1,271,839
ParamountCityUn.	4,245	38,472	4,735	.233	193,928
PomonaCity Un.	11,890	72,971	18,341	.233	415,678
SanMarino Un.	1,516	43,680	1,145	.233	195,413
SantaMonicaCityUn.	20,773	125,327	79,194	.233	919,320
SouthPasadenaUn.	2,567	24,214	2,280	.233	118,845
TempleCity Un.	1,305	23,882	1,095	.233	109,805
Torrance Un.	12,555	159,550	9,184	.233	749,484

APPENDIX TABLE 3 (continued)

District	State Assessed Roll (thousands)	Local Secured Roll (thousands)	Unsecured Roll (thousands)	Local Correction Factor	Equalized Valuation (thousands)
Marin County					
Novato Un.	1,540	12,496	600	.259	53,644
Monterey County					
Carmel Un.	2,249	35,680	1,040	.257	147,378
PacificGrove Un.	1,268	18,341	566	.257	76,067
Orange County					
LagunaBeachUn.	2,292	30,047	1,382	.219	148,099
OrangeCity Un.	6,343	43,858	2,910	.219	226,239
Placentia Un.	2,525	23,066	824	.219	114,134
Plumas County					
Plumas Unified	50,095	12,436	925	.213	162,918
Riverside County					
Corona City Un.	5,637	38,828	1,566	.270	160,881
PalmSpringsC Un.	8,687	87,607	4,421	.270	358,216
PaloVerdeC Un.	6,959	17,796	2,310	.270	88,380
Sacramento County					
SacramentoC Un.	41,676	208,463	28,593	.219	1,165,797
San Bernardino Co.					
ChinoCity Un.	6,522	19,815	1,915	.215	114,114
Fontana Un.	5,383	78,792	1,698	.215	385,135
Morongo Un.	2,635	14,300	2,278	.215	77,110
San Diego County					
Coronado Un.	1,386	18,622	961	.248	81,735
San Diego Un.	85,432	524,155	108,115	.248	2,720,339
Vista Un.	2,022	22,997	851	.248	100,209
San Francisco Co.					
SanFrancisco Un.	160,890	941,277	262,740	.254	5,062,001
San Joaquin Co.					
Lincoln Unified	1,320	12,529	452	.218	62,183
Stockton Unified	18,339	125,817	24,910	.218	728,085
San Mateo County					
So.SanFranciscoUn.	4,874	55,548	7,075	.205	315,228
SantaClara County					
Palo Alto U	9,080	99,018	11,611	.233	492,961
San Jose U	23,812	187,750	21,887	.233	947,355
Solano County					
Vallejo City Un.	5,665	51,513	3,217	.247	232,908
Tulare County					
Lindsay Un.	2,038	10,786	550	.221	55,371
Yolo County					
Washington Un.	2,750	17,922	4,051	.233	99,804

APPENDIX TABLE 4

Adjustment of Assessed Valuations Used to Distribute 1958-59 School Aids To Full Equalized Valuation For Selected Washington School Districts

District	Local Roll (thousands)	Correction Factor	State Roll (thousands)	Correction Factor	Equalized Valuation (thousands)
Asotin Co.					
Clarkston	7,081	18.4	427	35.5	39,686
Benton Co.					
Kennewick	17,013	20.6	3,218	36.0	91,525
Prosser Con.	8,338	20.6	1,042	36.0	43,365
Richland	6,776	20.6	655	36.0	34,711
Chelan Co.					
Wenatchee	29,135	21.7	2,003	37.0	139,674
Clallam Co.					
Port Angeles	18,641	18.7	931	36.5	102,234
Clark Co.					
Vancouver	50,063	20.2	2,726	34.0	255,855
Evergreen	5,202	20.2	464	34.0	27,117
Camas	16,531	20.2	646	34.0	83,757
BattleGround	4,332	20.2	5,478	34.0	37,469
Cowlitz Co.					
Longview	54,031	21.6	1,090	34.5	253,301
Kelso	10,376	21.6	769	34.5	50,265
Douglas Co.					
Eastmont	6,839	18.1	293	34.0	38,649
Franklin Co.					
Pasco	16,815	22.3	2,928	35.5	83,650
Grant Co.					
Moses Lake	17,935	25.8	1,057	38.5	72,260
Grays Harbor Co.					
Aberdeen	17,169	19.0	689	33.5	92,422
Hoquiam	13,552	19.0	344	33.5	72,355
Island Co.					
Oak Harbor	4,699	17.9	410	34.5	5,109
Jefferson Co.					
Port Townsend	6,150	20.2	375	34.5	31,622
King Co.					
Seattle	717,218	20.8	28,807	34.5	3,531,661
FederalWay	8,605	20.8	817	34.5	43,735
EnumClaw	8,698	20.8	1,043	34.5	44,841
MercerIsland	11,917	20.8	710	34.5	59,351
Highline	51,669	20.8	5,953	34.5	265,664
Renton	44,148	20.8	5,363	34.5	227,795
Bellevue	38,129	20.8	2,894	34.5	191,698
So.Central	6,105	20.8	441	34.5	30,629

APPENDIX TABLE 4 (continued)

District	Local Roll (thousands)	Correction Factor	State Roll (thousands)	Correction Factor	Equalized Valuation (thousands)
King Co. (cont'd)					
Auburn	14,636	20.8	1,887	34.5	75,837
SnoqualmieValley	7,065	20.8	2,207	34.5	40,363
Issaquah	6,709	20.8	905	34.5	34,880
Shoreline	31,991	20.8	1,063	34.5	156,885
LakeWash.	18,247	20.8	1,873	34.5	93,156
Kent	14,205	20.8	1,641	34.5	73,049
Kitsap Co.					
Bremerton	27,893	21.4	2,308	36.5	136,666
No. Kitsap	7,924	21.4	552	36.5	38,541
CentralKitsap	6,164	21.4	449	36.5	30,032
So. Kitsap	10,000	21.4	1,011	36.5	49,500
Kittitas Co.					
Ellensburg	11,744	23.2	1,370	36.0	54,426
Lewis Co.					
Chehalis	9,024	23.4	909	38.0	40,958
Centralia	10,637	23.4	1,381	38.0	49,093
Mason Co.					
Shelton	10,083	17.4	1,291	34.5	58,791
Pierce Co.					
Puyallup	12,535	21.9	1,572	36.0	61,619
Tacoma	141,687	21.9	20,607	36.0	692,958
Sumner	5,524	21.9	845	36.0	27,574
CloverPark	23,420	21.9	1,560	36.0	111,288
Peninsula	6,674	21.9	212	36.0	31,556
FranklinPierce	11,239	21.9	632	36.0	53,084
Bethel	4,905	21.9	1,383	36.0	26,241
Fife	4,016	21.9	311	36.0	19,204
Skagit Co.					
BurlingtonEdison	7,242	16.4	1,236	33.0	47,907
Sedro-Wooley	7,359	16.4	1,636	33.0	49,827
Anacortes	17,339	16.4	881	33.0	108,395
Snohomish Co.					
Everett	58,070	19.0	3,367	35.0	315,250
Edmunds	27,545	19.0	1,301	35.0	148,687
Arlington	5,169	19.0	733	35.0	29,298
Marysville	6,558	19.0	498	35.0	35,941
Snohomish	6,970	19.0	982	35.0	39,490
Spokane Co.					
Spokane	199,345	21.9	18,949	37.0	961,463
MedicalLake	1,276	21.9	903	37.0	8,269
Mead	12,848	21.9	1,116	37.0	61,682
CentralValley	19,161	21.9	1,411	37.0	91,308

APPENDIX TABLE 4 (continued)

District	Local Roll (thousands)	Correction Factor	State Roll (thousands)	Correction Factor	Equalized Valuation (thousands)
Thurston Co.					
Olympia	21,474	19.8	2,245	35.0	114,866
No. Thurston	5,606	19.8	871	35.0	30,802
Walla Walla Co.					
Walla Walla	31,774	23.8	3,091	35.5	142,212
Whatcom Co.					
Bellingham	31,664	18.3	3,767	31.5	184,984
Ferndale	11,688	18.3	592	31.5	65,747
Yakima Co.					
Yakima	38,745	18.2	10,338	33.5	243,744
Selah	4,797	18.2	670	33.5	28,359
Sunnyside	10,273	18.2	1,005	33.5	59,446
Toppenish	7,722	18.2	956	33.5	45,282
Wapato	6,353	18.2	1,105	33.5	38,203
WestValley	6,669	18.2	368	33.5	37,740

first quartile at 15.5%, and the third quartile at 25.1%, suggesting that the small number of extreme deviations might be ascribed as much to special factors not detected in the transactions, or to bad judgment of buyer or seller, as to the fault of the assessor.[7] Nevertheless, the inter-quartile range is large enough to raise serious questions about the value of data in which these intra-county variations are increased five-fold (by the method of developing equalized valuations) for any but the grossest of comparative purposes. The only justification for their use is that they probably are better for inter-district comparison than assessed values.

Kawalek reports similar ranges in intra-district sales-assessment ratios from a study of Cook County, Illinois, data.[8] This study is cited here because Illinois is reputed to have a better than average system of state supervision of assessments. New Jersey's inter-district variations (see footnote, page 86), while they give us no data on intra-county variations, pose an even more serious question about the value of equalized valuations *if* such variations approach the magnitude of those revealed in the California and Cook County studies, because of the much larger correction factors involved in some districts to project the assessed value to "full" or "true" or equalized valuations. In a 1960 study, the New Jersey Teachers' Association held costs and true valuations constant (a hypothetical $450 school cost per pupil and a $15,000 home) and found that taxes vary from less than fifty cents to $492 under 1958-59 in formulas and assessment practices.

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[7] The amount for which a parcel of property is sold usually must be determined from federal revenue stamps affixed to the deed. While this approach probably results in few underestimates of sale price, some heresay evidence has been noted of transactions by speculators in certain areas in which more federal stamps than are required are affixed to the deed, thus setting up an inflated value for resale purposes. Since the speculator looks for a quick turnover, he is unconcerned about inflating taxes on the property. Sale prices inflated in this way may account for some of the high deviations noted in the California study.

[8] Thaddeus P. Kawalek, "The Educational Implications of Property Assessment Practices in Illinois" (Chicago: Unpublished Doctoral Dissertation, The University of Chicago, 1959).

Table 5 presents data for the five states under study taken from the 1957 Census of Governments,[9] showing a simple sales-based ratio of assessed value to sales price, and a coefficient of intra-area dispersion (in percent) of the median area. The census data is for 1956. The state-determined ratios of assessed value to full value in the tax base bearing 1958-59 school costs are also shown, but it should be noted that this base varies from state to state, from 1956 to 1958, because of differences in levy procedure.

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[9] Bureau of the Census, *Taxable Property Values in the United States*, 1957 Census of Governments, Vol. V (Washington: U. S. Department of Commerce, 1959), Table 12, p. 81, and Table 19, p. 88. "The coefficient of dispersion is the percentage by which the individual sales items differ, on the average, from the median assessment ratio."

Table 5

State-estimated ratio of assessed to full value in percent, 1957; U. S. Bureau of Census Sales Ratio (based on sampling); and coefficient of intra-area dispersion of median area, 1956, for five states

State	State-determined Ratios of Assessed to Full Value (Base bearing 1958-1959 School Costs)	Census Ratio (Sampling) of Assessed Values to Simple Sales-based Average	Coefficient of Intra-area Dispersion (in percent) of Median Area
Washington	20.0	15.7	30.8
California	23.3	18.8	23.2
New Jersey	27.9	26.0	32.8
Nebraska	32.3	28.9	21.6
Wisconsin	55.6	45.6	14.5

If the coefficient of intra-area dispersion can be tentatively accepted as indicating the efficiency of state supervision of assessments, it offers some insight into the relative value of the equalized valuations developed in the five states for this study. The fact that the ordering of states on the continuum provided by this statistic approximates the historical order in which the states have extended state supervision of assessments offers some support for acceptance of the statistic as an indicator of efficiency. It is also noted that, with the exception of New Jersey, the ordering of the states on the coefficient of dispersion scale is roughly inverse to the ordering on the assessment-sales ratios determined by the state and by the Bureau of Census. This observation suggests that, as an indicator of the efficiency of state supervision, the coefficient of dispersion may be associated inversely with another indicator of efficiency, the ratio of assessed value to sales value.

CURRENT EXPENSE PER PUPIL

Current expenses for each district for the 1958-59 school year, as defined above, was divided by the average daily attendance (ADA) of that year to obtain the current expense per pupil. The definition of average daily attendance formulated by the U. S. Office of Education[10/] appeared to be tacitly accepted in the five states, although only Wisconsin expressed the definition in statutory language approximating that of the Office of Education.[11/] Wisconsin and New Jersey have changed from ADA to average daily membership as a basis for distributing state school funds, but continue to report ADA. Washington districts report ADA, but the method of computation appears to differ from the method used in the other four states (see below) for reporting purposes. The California statutory definition appears to deviate most from the U. S. Office standard by counting a full day for any part of a day attended, and counting excused absences as days attended.

An attempt was made to estimate the effects of variations in the procedures for computing ADA in the several states by computing the ratio of ADA to enrollment from the last available information from

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[10/] Reason, Foster, and Will, The Common Core of State Educational Information, p. 3.

[11/] Henning, R.J., "A Study of Pupil Attendance Accounting Practices in Five States" (Stanford School Finance Study Field Paper No. 5, unpublished, 1960), reviewed statutory and administrative provisions governing ADA.

the U. S. Office of Education biennial survey (1955-56), with the following results:

State	ADA as a percent of enrollment
Washington	84.6
California	95.8
New Jersey	88.6
Wisconsin	91.8
Nebraska	92.0

The major purpose for which ADA data were used in this study was to measure variation within states. Since variations among states were of little consequence for our purposes, no effort was made to adjust the reported ADA data. It is noted, however, that for inter-state comparisons of costs per pupil, of the type that are commonly made, the relationships shown above are of considerable importance, and raise a serious question as to the validity of such comparisons unless the ADA is adjusted. California's per pupil costs are probably consistently understated and Washington's overstated, simply because of differences in the way ADA records are kept in the two states.

Data on California's current expense per pupil in K - 12 districts were obtained directly from a publication of the State Department of Education.[12/] Some of the districts studied, however, also operated junior colleges, and the report included the junior college costs and enrollments in reporting current expense per pupil for these districts. In order to make data for these districts comparable to other K - 12

[12/] Henry W. Magnuson, Average Daily Attendance and Selected Financial Statistics of California School Districts, 1958-59 (Sacramento, California State Department of Education, Bureau of Education Research, mimeographed, unbound, 1960).

districts it was necessary to obtain information from the districts by questionnaire that would permit us to adjust the reported data. Table 6 shows the adjusted K - 12 current expense, ADA, and current expense per pupil

Table 6

Adjustment of California K - 14 districts' current expense to show K - 12 ADA and current expense per pupil

District	K - 12 Current Expense (thousands)	K - 12 ADA	K - 12 Current Expenditure Per Pupil
Oakland	$ 22,181	57,921	$ 383
Fresno	12,370	39,255	315
Glendale	8,067	20,384	396
Long Beach	25,778	67,435	382
Santa Monica	5,133	11,137	461
Palo Verde	1,230	3,147	391
Sacramento	14,341	37,676	381
San Diego	35,867	93,155	385
San Francisco	39,642	93,355	425
Stockton	9,762	27,115	360
San Jose	9,229	22,442	411
Vallejo	5,123	14,054	365

Washington current expense and ADA data were tabulated from district reports filed in the Washington Department of Public Instruction, as shown in Table 7.

New Jersey current expense data were obtained from a published report.[13/] ADA data were tabulated from annual reports of the local school districts on file in the commissioner's office, as shown in

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[13/] State of New Jersey, Eighth Annual Report of the Commissioner of Education: Financial Statistics of School Districts, 1958-59 (Trenton: Department of Education, 1960).

APPENDIX TABLE 7

Current Expense, Average Daily Attendance, and Current Expense Per Pupil for Selected Washington School Districts, 1958 - 1959

County	District	K - 12 Current Expense	K - 12 A D A	Current Expense Per Pupil
Asotin	Clarkston	766,363	2334	328
Benton	Kennewick	1,954,869	5696	343
	ProsserCons	603,033	1604	376
Chelan	Wenatchee	1,802,752	5620	352
Clallam	Pt.Angeles	1,518,170	4079	372
Clark	Vancouver	3,926,821	11603	377
	Evergreen	783,127	2162	362
	Camas	687,042	1998	344
	BattleGround	809,612	2281	355
Cowlitz	Longview	2,618,701	7344	386
	Kelso	1,287,397	3721	346
Douglas	Eastmont	862,234	2229	387
Franklin	Pasco	1,419,163	4988	345
Grant	MosesLake	1,789,629	5043	355
GraysHarbor	Aberdeen	1,639,903	5021	365
	Hoquiam	884,853	2766	320
Island	OakHarbor	869,498	2169	401
Jefferson	Ft.Townsend	648,938	1555	417
King	Seattle	34,928,445	91762	390
	Enumclaw	711,897	1940	367
	MercerIsland	856,261	2565	334
	Highline	7,077,900	19008	372
	Renton	3,294,677	7657	430
	Bellevue	3,406,863	8364	407
	S.Central	948,457	2216	428
	Auburn	1,585,364	4482	361
	SnoqualmieV	522,427	1626	321
	Issaquah	736,309	2012	366
	Shoreline	4,147,264	10674	389
	LakeWash.	2,020,986	5013	403
	Kent	1,714,554	4559	376
Kitsap	Bremerton	3,355,824	9715	395
	N. Kitsap	766,420	1987	386
	C. Kitsap	863,444	2240	385
	S. Kitsap	1,505,468	4263	353
Kittitas	Ellensburg	871,877	2306	378
Lewis	Chehalis	698,210	1671	418
	Centralia	1,187,325	3291	413
Mason	Shelton	904,139	2451	369
Pierce	Puyallup	1,526,092	4488	340
	Tacoma	12,103,372	30096	402
	Sumner	658,833	1821	362
	CloverPark	2,845,375	7090	407
	Peninsula	655,878	1561	420
	Bethel	1,006,520	2303	437
	Fife	551,501	1510	365
	Franklin P.	2,235,271	4934	453

APPENDIX TABLE 7 (continued)

County	District	K - 12 Current Expense	K - 12 A D A	Current Expense Per Pupil
Skagit	BurlingtonEd.	698,492	1932	362
	SedroWooley	960,239	2559	375
	Anacortes	875,954	2422	362
Snohomish	Everett	3,499,754	12033	334
	Edmunds	3,555,296	10650	334
	Arlington	620,094	1502	413
	Marysville	870,122	2317	376
	Snohomish	921,959	2611	353
Spokane	Spokane	12,709,398	29807	426
	Mead	752,690	1841	409
	C. Valley	2,152,375	4737	454
Thurston	Olympia	1,986,536	5214	382
	N. Thurston	809,767	2325	348
WallaWalla	WallaWalla	1,987,061	5341	378
Whatcom	Bellingham	2,896,602	7592	387
	Ferndale	704,875	1778	396
Yakima	Yakima	3,118,453	9783	351
	Selah	559,790	1672	335
	Sunnyside	1,205,850	3537	341
	Toppenish	861,052	2249	383
	Wapato	1,070,517	2609	410
	WestValley	799,764	2003	399
Benton	Richland	2,789,665	6397	436
King	FederalWay	972,562	2697	361
Spokane	MedicalLake	573,850	1510	380

Table 8, together with current expense per pupil. Wisconsin and Nebraska current expense and ADA data, shown in Tables 1 and 2, were tabulated from district reports on file in the state offices.

THE VOLUNTARY LEVY RATE

The voluntary levy rate was obtained by subtracting the state mandated levy rate from the required levy rate. It is voluntary only in the sense that it is locally determined. The state-mandated levy rate was obtained by determining the yield of the minimum rate required by state law to be levied in local districts, and dividing this yield by the equalized value of the district. The voluntary levy rate is interpreted in this study as a measure of local effort.

The state-mandated levy rate and its complement, the local voluntary rate, have been generally ignored in studies of local effort and initiative. The U. S. Office of Education classifies the yield of the mandated rate with local revenue, and makes no distinction between mandated levies and voluntary levies. School finance studies usually have made no distinction in measuring local effort or initiative between the voluntary and mandated local levies. However, the project director pointed out in an earlier study[14] that the mandated levy is more properly excluded from other local levies when measures of local effort or initiative are to be applied, because the mandated levy has all of the effects of a state tax except the equalization of benefits. In states that mandate a minimum local levy rate for school purposes, the

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[14] James, op. cit.

APPENDIX TABLE 8

Average Daily Attendance and Current Expense Per Pupil of Selected New Jersey School Districts, 1958-59

County	District	A D A	Current Expense Per Pupil
Atlantic	Atlantic City	7369	382
	Pleasantville City	2829	368
Bergen	BergenfieldBorough	4744	367
	CliffsideParkBoro	2273	458
	Dumont Borough	3166	390
	Englewood City	3473	563
	Fairlawn Borough	6914	444
	Fort Lee Borough	1849	506
	Garfield City	3486	435
	Glen Rock Borough	2491	569
	Hackensack City	4910	539
	Hasbrouck Hgts. Boro	1776	452
	Lodi Borough	3628	374
	Lyndhurst Township	3027	360
	North Arlington Boro	1648	477
	Ramsey Borough	2135	426
	Ridgefield Park Twsp	1967	475
	Rutherford Boro	2352	503
	Teaneck Township	7404	445
	Tenafly Borough	2913	461
	Westwood Consolidated	2657	475
Burlington	Burlington City	2731	452
	Moorestown Twsp	2692	476
	Palmyra Borough	1673	395
Camden	Audubon Borough	1956	345
	Camden City	16294	340
	Collingswood Boro	2979	387
	Glouster City	2136	327
	Haddonfield Boro	2665	362
	Haddon Heights Boro	2233	345
Cape May	Ocean City	1517	424
Cumberland	Bridgeton City	4912	343
	Millville City	3611	318
	Vineland City	5785	338
Essex	Belleville Town	4926	426
	Bloomfield Town	6944	505
	Caldwell-W.Caldwell Twsp.	3070	476
	East Orange City	7682	540
	Irvington Town	6587	498
	Livingston Twsp	4739	361
	Millburn Twsp	3158	599
	Montclair Town	6287	554
	Newark City	57392	491
	Nutley Town	4460	425
	Orange City	4134	472
	So. Orange & Maplewood	6583	559
	Verona Borough	2324	484
	West Orange Town	5914	548
Gloucester	Glassboro Borough	1885	450
	Paulsboro Township	1871	396
	Pittman Borough	2087	334

APPENDIX TABLE 8 (continued -2)

County	District	A D A	Current Expense Per Pupil
Gloucester	Woodbury City	2993	341
Hudson	Bayonne City	7888	471
	Hoboken City	5912	501
	Jersey City	28019	490
	Kearney Town	4552	497
	Union City	5873	523
	Weehawken Twsp	2122	534
	West New York Town	4164	542
Mercer	East Windsor Twsp	1562	415
	Ewing Township	3893	396
	Hamilton Township	8845	375
	Hopewell Township	1726	495
	Princeton Borough	2279	525
	Trenton City	13629	459
Middlesex	Carteret Borough	2685	373
	Metuchen Borough	2560	437
	New Brunswick City	5608	456
	Perth Amboy City	5221	471
	Sayreville Borough	3047	445
	South Plainfield Boro	3270	390
	South River Boro	2718	335
	Woodbridge Twsp	13243	350
Monmouth	Asbury Park City	3426	388
	Keyport Borough	1647	376
	Long Branch City	4767	401
	Manasquan Borough	1711	414
	Matawan Twsp	2469	339
	Middletown Twsp	6613	346
	Neptune Township	3492	329
	Red Bank Borough	2493	502
Morris	Boonton Town	1546	509
	Butler Borough	1785	488
	Chatham Borough	2167	506
	Dover Town	2779	444
	Madison Borough	2469	501
	Morristown Town	2799	586
	Parsippany -TroyHillsTwsp	3267	456
	Roxbury Twsp	2053	433
Ocean	Brick Township	2534	381
	Lakewood Twsp	2833	418
	Toms River Schools	3601	382

APPENDIX TABLE 8 (continued -3)

County	District	A D A	Current Expense Per Pupil
Passaic	Clifton City	11235	395
	Hawthorne Boro	2787	382
	Passaic City	7071	458
	Paterson City	19842	426
	Pompton Lakes Boro	1778	398
	Wayne Township	5048	396
Salem	Lower Penns Neck Twsp	2210	505
	PennsGrove-UpperPenns Neck Township	2699	345
	Salem City	2097	381
Somerset	Bound Brook Boro	2255	416
	Manville Borough	1884	376
	North Plainfield Boro	2985	429
	Somerville Boro	3160	427
Sussex	Newton Town	2058	415
Union	Cranford Twsp	4666	369
	Elizabeth City	12295	521
	Hillside Twsp	3712	444
	Linden City	6385	522
	Plainfield City	7511	452
	Rahway City	4665	367
	Roselle Borough	3041	443
	Roselle Park Boro	2302	405
	Scotch Plains Twsp	4535	376
	Summit City	3588	513
	Union Township	7541	462
	Westfield Town	6464	448
Warren	Hackettstown Town	1229	376
	Phillipsburg Town	3254	317
	Washington Borough	1411	364

yield of this levy cannot be construed as a measure of initiative on the part of local taxpayers, because no initiative (and in some states, no discretion) is involved, unless the local district is willing to suffer state-imposed sanctions. It should be noted, however, that not all states mandate local levies. Those states that mandate local levies vary in the sanctions imposed for non-compliance.

Washington mandates 14 mills on the assessed valuation for districts included in this study. The effective mandated levy therefore varies with assessment practices. Since local assessment ratios varied from assessed value of 13.1% to 27.3% of equalized valuations, the effective equalized rate could vary from 1.8 mills to 3.8 mills. The higher rate is 111% larger than the lower rate. Among the districts we studied, the range of the equalized rates was 2.35 to 3.7 mills, the latter being 54% greater. The penalties are mild in Washington for failure to make the mandated levy. The district loses only an amount of equalization aid equal to the difference between the yield of the tax actually levied and the yield of the 14-mill tax.

California mandates 11 mills for districts included in our study. Since variations in assessment ratios range from 19.5% to 27.4%, the effective equalized rates vary from 2.1 mills to 3.0 mills. Thus the effective yield of the mandated rate may be as much as 43% higher in the counties with highest ratios than it is in those with the lowest. Failure to make the mandated levy results in all equalization aids being withheld, but flat aids are paid to all districts regardless of the levy made.

New Jersey specifies a 5-mill rate on the equalized valuation for determining equalization aid, but does not invoke penalties if districts fail to make this levy.

Wisconsin requires a 5-mill levy on the equalized valuation in K - 12 districts and withholds both equalization and flat aids if the levy is not made.[15]

Nebraska has no clearly stated mandate, but requires that districts receiving emergency aid make a 12-mill levy. We used the 12-mill rate as a guide to estimating voluntary levies in Nebraska because it seemed a reasonable level and indicated legislative policy in one area that may be extended in the future. Since assessment ratios vary in Nebraska from 11% to 54%, the effective equalized rate will vary from 1.2 to 6.5 mills.

THE VOLUNTARY EXPENDITURE PER PUPIL

The voluntary expenditure per pupil was obtained by reducing the net current expense by the amount of the yield of the mandated levy and dividing the remainder by the resident ADA. Non-resident pupils in average daily attendance were excluded from the ADA figure because the tuition paid for these pupils is deducted from cuttent expense in deriving net current expense. The statistic is interpreted as a measure of local initiative.

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[15] E. L. Lindman suggested in a letter to the author that Wisconsin may provide a good example of a sub-category under voluntary levies, which might be called "state-stimulated voluntary levies," since it is possible for the state to provide inducements, as is done in Wisconsin, for districts to levy more than the mandated rates because additional rate increases under specified conditions result in progressively higher payments of state funds.

Further Detail On Net Current Expense

Because of the differences in form and availability of state data, each state presented a different problem in the derivation of net current expense.

Wisconsin

Wisconsin data were the simplest to process, because the state equalization formula requires a statement of net current expense, and the state report forms carry a line on which it is determined by the local district. However, transportation is not included in current expense under the Wisconsin accounting system. We therefore tabulated net current expense and transportation costs and receipts from district records on file in the state office in Madison, reduced the costs of transportation by all revenue received for this purpose except local taxes and added the net cost to net current expense as defined in Wisconsin to produce a net current expense borne by local property comparable for our purposes to the data for the other four states, as shown in Table 9.

California

California finance data are published,[16] with current expense totaled. From this total were deducted receipts categorized as "state apportionments," "federal subventions," "county subventions," "high

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[16] Alan Cranston, Annual Report of Financial Transactions Concerning School Districts of California, 1958-59 (Sacramento: State Controller's Office, 1960).

APPENDIX - TABLE 9

Net Current Expense, Required Levy Rate, and Voluntary Expenditure Per Pupil in Selected Wisconsin School Districts, 1958-59

County	District	Net Current Expense (thousands)	Required Levy Rate in Mills	Voluntary Expenditure Per Pupil
Ashland	Ashland	373	12.6	$118
Barron	Rice Lake	264	10.7	104
Brown	Green Bay	2,461	8.8	137
Chippewa	ChippewaFalls	511	10.8	107
Columbia	Portage	274	10.7	104
Dane	Madison	5,527	9.0	152
Dodge	Waupun	326	13.2	182
	BeaverDam	483	9.6	145
Douglas	Superior	1,020	11.1	116
Dunn	Menomonie	154	6.8	30
EauClaire	EauClaire	1,729	11.3	164
Jackson	BlackRiverFalls	194	12.1	72
Jefferson	Watertown	497	8.6	116
	FortAtkinson	436	8.7	123
Kenosha	Kenosha	3,067	10.4	174
LaCrosse	LaCrosse	2,036	8.6	128
Lincoln	Merrill	357	10.9	147
Langlade	Antigo	276	10.1	99
Manitowoc	Manitowoc	1,323	8.6	139
Marathon	Wausau	1,300	8.9	124
Milwaukee	Cudahy	799	7.7	127
	Greenfield	675	12.2	177
	Milwaukee	25,493	7.4	98
	OakCreek	502	11.9	145
	Shorewood	1,011	11.2	286
	SouthMilwaukee	831	9.0	164
	Wauwatosa	2,925	9.1	189
	WestAllis	3,974	7.1	130
	WhitefishBay	1,407	11.6	271
Marinette	Marinette	408	9.2	93
Monroe	Tomah	170	7.0	27
Outagamie	Appleton	1,997	9.0	135
Racine	Racine	3,714	9.0	138
Rock	Janesville	1,409	8.9	121
	Beloit	1,893	10.8	155
Shawano	Shawano	578	12.9	168
Sauk	Baraboo	268	10.0	107
Sheboygan	Sheboygan	2,074	11.0	182
Waukesha	Oconomowoc	422	10.2	169
	MenomoneeFalls	482	10.4	140
	Waukesha	1,299	8.7	132
Winnebago	Menasha	586	6.3	67
	Neenah	769	8.3	108
	Oshkosh	1,808	9.9	143
Wood	Marshfield	486	9.6	150
	WisconsinRapids	501	6.3	55

school tuition tax," and "other income." The remainder is net current expense. However, additional information was needed for districts operating junior colleges in order to reduce net current expense for the K - 14 program to K - 12 net current expense. A questionnaire (see Appendix B, Exhibit C) was sent to all districts operating K - 14 programs requesting a breakdown of costs of current operation by elementary, secondary, and junior college levels, a similar breakdown of ADA, information on non-resident pupils by levels, and information on enrollments of non-tax-supported schools. The response to the questionnaire was less than satisfactory. Many district officials reported that they were unable to break down the data in the manner requested because records were not kept by grade levels. Subsequent correspondence and a number of visits to local school districts elicited the necessary information from all but one district, whose officials continued to insist that it was impossible to provide the information we requested. For this district we prepared an estimate of costs at the several levels, based on weighted pupil costs. The weights assigned were developed from the average costs of the other K - 14 districts as follows:

K - 8	.85
9 - 12	1.26
13 - 14	1.34.

With the information obtained by questionnaire, the junior college ADA and current expense were removed from district totals, leaving only K - 12 data. The state aid payments for 1958-59 were reduced by the amount of junior college aid before they were subtracted from current expense. The county subventions total reported for the district was reduced by the amount of junior college tuition before this receipt item was subtracted from current expense, because the California Manual of School Accounting requires junior college tuition to be reported under the heading "county subventions." However, not all districts operating junior colleges complied with this directive. Therefore, a subsequent request was made to county superintendents of schools to break down the amount of junior college tuition reported by these districts in county subventions and to report any other amounts of junior college tuition allocated to other columns in the report. After all adjustments were made, it was possible to proceed with the reduction of current expense to net K - 12 current expense borne by local property. Table 10 shows the resultant tabulation for California school districts of net current expense, required levy rate, full-value mandated rate, and voluntary expenditures per pupil.

Washington

Washington finance data were tabulated from reports filed by each district in the Washington Department of Public Instruction, Olympia. Again, some districts operated junior colleges, and again it was necessary to send questionnaires to those districts (see Appendix B, Exhibit D). Some additional help on this problem was obtained from a published report.[17/] With the additional information, expenditures of

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[17/] L. J. Elias, The Community-Junior Colleges of Washington Annual Report, 1958-59 (Olympia: Dept. of Public Instruction, 1959), mimeographed.

APPENDIX - TABLE 10

Net Current Expense, Required Levy Rate, Full-Value Mandated Levy Rate, and Voluntary Expenditure Per Pupil for Selected California Districts, 1958-59

District	Net Current Expense (thousands)	Required Levy Rate (in mills)	Full-Value Mandated Levy Rate (in mills)	Voluntary Expenditure Per Pupil
Alameda County				
Alameda	1,547	6.7	2.6	91
Albany	565	8.2	2.6	138
Berkeley	4,851	7.9	2.6	189
Oakland City	12,687	5.5	2.6	114
Piedmont	574	6.6	2.6	153
San Leandro City	2,648	6.3	2.6	135
Butte County				
Paradise	281	5.3	2.3	101
Contra Costa County				
Antioch-Live Oak	1,718	6.5	2.5	225
Mt. Diablo City	3,403	6.8	2.5	82
Pittsburg	1,752	5.5	2.5	184
Fresno County				
Fresno City	4,522	4.7	2.4	57
Humboldt County				
So. Humboldt	259	6.1	2.5	83
Kern County				
Muroc	197	4.3	2.5	39
Los Angeles County				
Arcadia	2,141	6.0	2.6	144
Bellflower	1,290	6.4	2.6	70
Beverley Hills	1,892	2.6	2.6	10
Bonita	414	6.4	2.6	87
Burbank	4,450	3.6	2.6	75
Claremont	726	7.7	2.6	160
Culver City	2,078	6.0	2.6	177
El Segundo	1,245	4.0	2.6	125
Glendale	5,011	5.5	2.6	132
Inglewood City	3,263	6.2	2.6	181
Long Beach	13,978	5.2	2.6	105
Lynwood	1,328	7.7	2.6	129
Montebello	5,539	4.4	2.6	120
Paramount City	1,388	7.2	2.6	109
Pomona City	2,230	5.4	2.6	85
San Marino	1,048	5.4	2.6	156
Santa Monica City	3,454	3.8	2.6	99
South Pasadena	762	6.4	2.6	157
Temple City	667	6.0	2.6	103
Torrance	3,769	5.0	2.6	77
Marin County				
Novato	360	6.7	2.8	70

APPENDIX - TABLE 10 (continued)

District	Net Current Expense (thousands)	Required Levy Rate (in mills)	Full-Value Mandated Levy Rate (in mills)	Voluntary Expenditure Per Pupil
Monterey County				
Carmel	746	5.1	2.8	155
Pacific Grove	429	5.6	2.8	67
Orange County				
Laguna Beach	535	3.6	2.4	108
Orange City	1,148	5.0	2.4	90
Placentia	561	4.9	2.4	142
Plumas County				
Plumas	937	5.8	2.3	197
Riverside County				
Corona City	888	5.5	3.0	75
Palm Springs City	1,351	3.8	3.0	88
Palo Verde City	631	7.1	3.0	117
Sacramento County				
Sacramento	6,533	5.6	2.4	99
San Bernardino County				
Chino City	536	4.7	2.4	58
Fontana	2,192	5.7	2.4	140
Morongo	387	5.0	2.4	109
San Diego County				
Coronado	469	5.7	2.7	76
San Diego	17,520	6.4	2.7	108
Vista	443	4.4	2.7	39
San Francisco County				
San Francisco	22,521	4.4	2.2	90
San Joaquin County				
Lincoln	261	4.2	2.4	38
Stockton	4,060	5.6	2.4	85
San Mateo County				
So. San Francisco	1,578	5.0	2.3	99
Santa Clara County				
Palo Alto	3,951	8.0	2.6	204
San Jose	5,871	6.2	2.6	153
Solano County				
Vallejo City	1,245	5.3	2.7	44
Tulare County				
Lindsay	231	4.2	2.4	54
Yolo County				
Washington	509	5.1	2.6	58

districts operating junior colleges were reduced to K - 12 expenditures. Community-services expenditures were subtracted to bring the Washington data into line with our definition of current expense. Warrants outstanding at the beginning of the year were subtracted, and warrants outstanding at the end of the year were added, to adjust expenditures to 1958-59 current expense. Total receipts applicable to current expense were then reduced by district taxes and transfers from capital accounts to obtain non-local revenues, and these in turn were subtracted from current expense to obtain net current expense, as shown in Table 11.

New Jersey

New Jersey finance data were obtained from a published report.[18/] Revenues from the state formula for atypical pupils, transportation, federal vocational aid and Public Law 874, tuition, municipal surplus, and miscellaneous funds were subtracted from the total day-school expenditures. The remainder was net current expense as shown in Table 12.

Nebraska

Current expense data were tabulated from district reports on file in the Nebraska State Department of Education at Lincoln. County, state, and federal revenues were also tabulated, totaled, and subtracted from current expense to obtain net current expense borne by local property, as shown in Table 13.

[18/] Eighth Annual Report.

APPENDIX - TABLE 11

Net Current Expense, Required Levy Rate, Full-Value Mandated Rate, and Voluntary Expenditure Per Pupil for Selected Washington School Districts, 1958-59

District	Net Current Expense (thousands)	Required Levy Rate (in mills)	Full-Value Mandated Rate (in mills)	Voluntary Expenditure Per Pupil
Asotin Co.				
Clarkston	91	2.3	2.6	0
Benton Co.				
Kennewick	26	2.8	3.1	0
Prosser Cons.	132	3.1	3.0	1
Chelan Co.				
Wenatchee	440	3.2	3.1	1
Clallam Co.				
Pt. Angeles	273	2.7	2.7	0
Clark Co.				
Vancouver	867	3.4	2.9	13
Evergreen	94	3.5	3.0	8
Camas	235	2.8	2.9	0
Battle Ground	32	.9	3.7	0
Cowlitz Co.				
Longview	827	3.3	3.0	9
Kelso	172	3.4	3.1	5
Douglas Co.				
Eastmont	155	4.0	2.6	26
Franklin Co.				
Pasco	191	2.3	3.3	0
Grant Co.				
Moses Lake	152	2.1	3.7	0
Grays Harbor Co.				
Aberdeen	262	2.8	2.7	3
Hoquiam	160	2.2	2.7	0
Island Co.				
Oak Harbor	158	5.8	2.6	41
Jefferson Co.				
Pt. Townsend	57	1.8	2.9	0
King Co.				
Seattle	12,341	3.5	3.0	15
Enumclaw	207	4.6	3.0	40
Mercer Is.	139	2.3	3.0	0
Highline	1,209	4.6	3.0	22
Renton	1,011	4.4	3.0	42
Federal Way	81	1.9	3.0	0

APPENDIX - TABLE 11 (continued)

District	Net Current Expense (thousands)	Required Levy Rate (in mills)	Full-Value Mandated Rate (in mills)	Voluntary Expenditure Per Pupil
King Co. (cont'd)				
Bellevue	862	4.5	3.0	35
S. Central	273	8.9	3.0	82
Auburn	136	1.8	3.0	0
Snoqualmie Valley	66	1.6	3.2	0
Issaquah	117	3.4	3.0	6
Shoreline	914	5.8	2.9	43
LakeWashington	319	3.4	3.0	8
Kent	243	3.3	3.0	5
Kitsap Co.				
Bremerton	590	4.3	3.1	20
N. Kitsap	133	3.5	3.1	7
C. Kitsap	69	2.3	3.1	0
S. Kitsap	42	..9	3.1	0
Kittitas Co.				
Ellensburg	170	3.1	3.4	0
Lewis Co.				
Chehalis	123	3.0	3.4	0
Centralia	218	4.4	3.4	17
Mason Co.				
Shelton	140	2.4	2.5	0
Pierce Co.				
Puyallup	94	1.5	3.2	0
Tacoma	3,344	4.8	3.1	41
Sumner	105	3.8	3.2	9
Clover Park	419	3.8	3.1	11
Peninsula	113	3.6	3.3	6
Franklin P.	607	11.4	3.1	89
Bethel	239	9.1	3.4	66
Fife	75	3.9	3.2	10
Skagit Co.				
Burlington Ed.	152	3.2	2.5	18
Sedro Wooley	117	2.4	2.5	0
Anacortes	233	2.2	2.4	0
Snohomish Co.				
Everett	601	1.9	2.7	0
Edmunds	295	2.0	2.7	0
Arlington	113	3.8	2.8	21
Marysville	145	4.1	2.7	21
Snohomish	110	2.8	2.8	0
Spokane Co.				
Spokane	4,548	4.7	3.2	51
Mead	248	4.0	3.2	29
C. Valley	731	8.0	3.2	94

APPENDIX - TABLE 11 (cont'd -3)

District	Net Current Expense (thousands)	Required Levy Rate (in mills)	Full-Value Mandated Rate (in mills)	Voluntary Expenditure Per Pupil
Thurston Co.				
Olympia	436	3.8	2.9	22
N. Thurston	47	1.5	2.9	0
Walla Walla Co.				
Walla Walla	445	3.1	3.4	0
Whatcom Co.				
Bellingham	667	3.6	2.7	23
Ferndale	127	1.9	2.6	0
Yakima Co.				
Yakima	429	1.8	2.8	0
Selah	35	1.2	2.7	0
Sunnyside	116	1.9	2.7	0
Toppenish	120	2.6	2.7	0
Wapato	94	2.5	2.7	0
West Valley	155	4.1	2.6	28
Benton Co.				
Richland	0	0	3.0	0
Spokane Co.				
Medical Lake	0	0	3.7	0

APPENDIX - TABLE 12

Net Current Expense, Required Levy Rate, and Voluntary Expenditures Per Pupil for Selected New Jersey School Districts

1958 - 59

County	District	Net Current Expense (thousands)	Required Levy Rate (in mills)	Voluntary Expenditure Per Pupil
Atlantic	Atlantic City	1,987	6.8	81
	Pleasantville City	555	16.0	159
Bergen	BergenfieldBorough	1,378	10.0	144
	CliffsideParkBoro	719	9.7	198
	Dumont Borough	996	12.2	189
	Englewood City	1,699	11.0	270
	Fairlawn Borough	2,547	13.4	237
	Fort Lee Borough	783	6,0	74
	Garfield City	1,260	12.0	213
	Glen Rock Borough	1,277	17.3	366
	Hackensack City	1,918	10.4	244
	Hasbrouck Hfts. Boro	693	10.3	203
	Lodi Borough	1,004	10.7	157
	Lyndhurst Township	882	9,6	140
	North Arlington Boro	694	9.4	198
	Ramsey Borough	561	9.7	157
	Ridgefield Park Twsp	727	13.3	260
	Rutherford Boro	1,023	10.3	225
	Teaneck Township	2,861	7.4	217
	Tenafly Borough	926	8.9	158
	Westwood Consolidated	1,057	12.5	246
Burlington	Burlington City	396	8.2	70
	Moorestown Twsp	751	11.7	193
	Palmyra Borough	289	12.7	145
Camden	Audubon Borough	438	11.7	155
	Camden City	3,982	11.9	142
	Collingswood Boro	633	9.2	136
	Glouster City	482	10.1	120
	Haddonfield Boro	635	8.2	112
	Haddon Heights Boro	332	8.6	96
Cape May	Ocean City	384	2.8	00
Cumberland	Bridgeton City	751	10.6	106
	Millville City	646	10.0	97
	Vineland City	1,395	9.3	123
Essex	Belleville Town	1,762	11.2	199
	Bloomfield Town	2,933	11.2	241
	Caldwell-W.Caldwell Twsp.	1,010	12.1	234
	East Orange City	3,024	10.5	207
	Irvington Town	2,871	13.4	274
	Millburn Twsp	1,684	8.7	227
	Livingston Twsp	1,315	10.4	144

APPENDIX - TABLE 12 (cont'd 2)

County	District	Net Current Expense (thousands)	Required Levy Rate. (in mills)	Voluntary Expenditure Per Pupil
Essex (cont'd)	Montclair Town	3,019	13.1	298
	Newerk City	22,529	17.1	281
	Nutley Town	1,603	11.7	207
	Orange City	1,656	15.5	260
	SoOrange & Maplewood	3,239	12.2	291
	Verona Borough	961	13.3	259
	West Orange Town	2,813	12.7	389
Gloucester	Glassboro Borough	498	1[illegible].4	202
	Paulsboro Township	358	15.6	192
	Pittman Borough	353	11.1	111
	Woodbury City	542	11.5	138
Hudson	Bayonne City	3,107	12.6	238
	Hoboken City	2,179	20.8	281
	Jersey City	11,373	15.5	281
	Kearney Town	1,978	8.7	185
	Union City	2,216	19.9	311
	Weehawken Twsp	732	12.9	299
	West New York Town	1,700	19.2	324
Mercer	East Windsor Twsp	363	13.2	171
	Ewing Township	1,295	10.9	180
	Hamilton Township	2,567	11.4	163
	Hopewell Township	719	12.7	253
	Princeton Borough	471	6.2	85
	Trenton City	5,163	13.0	238
Middlesex	Carteret Borough	844	8.8	136
	Metuchen Borough	878	12.8	217
	New Brunswick City	1,734	11.0	204
	Perth Amboy City	2,105	12.7	247
	Sayreville Borough	1,024	6.8	95
	SouthPlainfield Boro	910	12.1	163
	South River Boro	464	9.8	110
	Woodbridge Twsp	3,605	10.6	144
Monmouth	Asbury Park City	670	8.5	121
	Keyport Borough	206	9.3	92
	Long Branch City	1,119	13.9	174
	Manasquan Borough	169	5.3	13
	Matawan Twsp	478	11.4	114
	Middletown Twsp	1,392	10.1	111
	Neptune Township	714	9.4	101
	Red Bank Borough	704	10.3	209

APPENDIX - TABLE 12 (cont'd 3)

County	District	Net Current Expense (thousands)	Required Levy Rate (in mills)	Voluntary Expenditure Per Pupil
Morris	Boonton Town	448	10.7	240
	Butler Borough	318	14.5	254
	Chatham Borough	749	12.0	240
	Dover Town	708	12.0	198
	Madison Borough	990	11.9	244
	Morristown Town	1,185	11.4	294
	Parsippany-TroyHill Twsp	1,141	12.8	214
	Roxbury Twsp	562	11.2	162
Ocean	Brick Twsp	752	8.7	128
	Lakdwood Twsp	769	12.9	184
	Toms River Schools	1,066	6.7	75
Passaic	Clifton City	3,679	8.5	135
	Hawthorne Boro	784	8.9	139
	Passaic City	2,727	13.6	244
	Paterson City	6,399	15.3	220
	Pompton Lakes Boro	575	12.8	198
	Wayne Township	1,591	10.3	163
Salem	Lower Penns Neck Twsp	810	7.3	117
	PennsGrove-UpperPenns Neck Township	545	12.8	127
	Salem City	390	14.2	145
Somerset	Bound Brook Boro	479	11.3	179
	Manville Borough	473	11.1	138
	North Plainfield Boro	994	14.2	216
	Somerville Boro	708	12.2	209
Sussex	Newton Town	220	10.1	106
Union	Cranford Twsp	1,375	10.9	160
	Elizabeth City	5,556	15.1	303
	Hillside Twsp	1,390	9.8	184
	Linden City	2,939	8.0	173
	Plainfield City	2,924	13.8	248
	Rahway City	1,278	10.8	151
	Roselle Borough	1,087	12.9	219
	Roselle Park Boro	716	13.5	196
	Scotch Plains Twsp	1,436	10.9	172
	Summit City	1,602	9.1	205
	Union Township	3,007	9.4	187
	Westfield Town	2,459	12.7	231
Warren	Hackettstown Town	225	10.9	161
	Phillipsburg Town	532	9.4	90
	Washington Borough	259	12.3	162

APPENDIX TABLE 13

Net current expense, required levy rate, mandated levy rate, and voluntary expenditures per pupil for selected Nebraska school districts, 1958-1959

District	Net Current Expense (thousands)	RequiredLevy Rate (in Mills)	Mandated LevyRate (in Mills)	Voluntary Expenditure Per Pupil
Alliance	420	9.4	2.8	192
Beatrice	514	9.3	4.0	140
Bellevue	262	7.9	3.2	55
Columbus	300	4.9	3.5	46
Fremont	626	6.8	3.8	82
Grand Island	1,051	9.5	4.0	130
Hastings	999	10.5	3.8	175
Kearney	481	8.6	3.6	126
Lincoln	5,828	8.4	2.9	180
McCook	414	11.4	3.6	166
Norfolk	397	6.8	3.8	85
Nebraska City	322	10.3	3.5	161
North Platte	822	9.8	3.8	110
Omaha	9,798	7.1	3.8	110
South Bluff	782	9.4	3.5	145
Sidney	449	9.4	3.5	162
South Sioux City	249	10.6	3.8	108
Westside Community	1,120	7.7	3.8	132

APPENDIX B

Exhibit A

California Tax Roll Questionnaire

Letters personally addressed to:
County Superintendents
California

We need a breakdown of the 1958-59 tax roll for a national study of school finance under way at Stanford University, School of Education.

I will appreciate your help if you can provide the breakdown requested on the attached form for the school districts indicated.

Cordially yours,

sd/ E. Thomas James

H. Thomas James
Associate Professor

Questionnaire enclosed with letter:

Breakdown of 1958-59 Tax Roll

County:

School District	Secured Roll			Unsecured Roll	Total Roll
	Utility or State Board	Local	Total		

Exhibit B

Washington Tax Roll Questionnaire

Letters personally addressed to:
County Superintendents
Washington

We need a breakdown of the 1958-59 tax roll for a national study of school finance under way at Stanford University, School of Education.

I will appreciate your help if you can provide the breakdown requested on the attached form for the school districts indicated.

Cordially yours,

sd/ H. Thomas James

H. Thomas James
Associate Professor

Questionnaire enclosed with letter:

1958 Assessed Valuations for 1959 Taxes

County:

District	By County Assessor (Less Public Utilities)	By Tax Commissioner (Public Utilities)	Total Assessed Valuation

Exhibit C

California District Questionnaire

Letter personally addressed to:
District Superintendents
California

I am directing a study of school finance which has been authorized and supported by the U. S. Office of Education. This will cover five representative states, of which California is one.

Much of the data needed for the study is being obtained from the State Department of Education and, in some instances, from California's County Superintendents of Schools. However, the information on current costs (Items 1 through 7) is not broken down by grade level in the reports to the State Department of Education for unitied 7 to 12, 7 to 14, or 9 to 14 school districts. Therefore, we are asking your help in giving us the information for the different levels from your records on the enclosed report form.

Should you also conveniently have available the other information requested, relating to non-resident pupils and the parochial school enrollment in your district, I shall appreciate your providing it for me on the attached sheet.

Please accept my thanks for your assistance in this project.

Cordially yours,

sd/ H. Thomas James
Associate Professor

Report form enclosed:

Unified Districts, or Districts Operating
7 to 12, 7 to 14, or 9 to 14 Programs

School District: County:

Line 7A. Costs of Current Operation, 1958-59

Total: ____________________

Grades K-8 (or 7-8): __________

9-12: ____________________

Junior college ____________________

A D A: K-8 (or 7-8) ________ 9-12 ______ Junior College ______

Non-Resident pupils (please check which unit is reported)

ADA Enrollment

Grades K-8 (or 7-8) ________ 9-12 ______

Junior College __________

Estimate of parochial school enrollments in the district:

Grades K-8 ________ 9-12 ________

Exhibit D

Washington District Questionnaire

Letters personally addressed to:
District Superintendents
Washington

As part of a study in school finance being carried out at Stanford University, an attempt is being made to determine the expenditures and sources of revenue for the education of children from Kindergarten through Grade 12. In the case of districts which report some attendance beyond Grade 12, some difficulty is being experienced in separating out that part of revenue and expenditure which does not apply to the K-12 program.

Would you kindly assist us by providing the information requested on the attached sheet for the school year 1958-59? Please correct the figures entered for Items 1 and 2 if they are not correct for the school year 1958-59.

Thank you for your attention. We will appreciate any assistance you can give us.

Cordially yours,

sd/ H. Thomas James

Associate Professor

Report form enclosed:

Information on Washington School Districts
Operating Programs Beyond Grade 12

District:
County:

1. Average daily attendance Grades 13 and 14 ________________
2. Expenditures for Grades 13 and 14 ________________
3. Revenue applied to the education of Grade 13 and 14 pupils from the following sources:
    - a. State ________
    - b. County ________
    - c. Local tax revenue other than the property tax ________
    - d. Federal ________
    - e. Non-tax revenue
        - Enrollment Fees ________
        - Other ________

APPENDIX C

Some Further Notes on the Five Systems of Support

This appendix reports some further results of an analysis of the mechanisms, or systems of support, used in the 1958-59 school year by the five states under study for allocating state and local revenues to the local school systems included in the study. It should be noted that these mechanisms are frequently complex, that several systems are in use in each state for different classes of school districts, and that only those parts of the mechanisms affecting school districts with 1,500 or more pupils through the twelfth grade are treated in this study.

The United States Office of Education periodically provides detailed analyses of the school financial support systems of the several states. Revenue is analyzed by government source, and state and local revenues are further categorized by "property" and "other." State revenues are also categorized by "permanent school endowment," "earmarked taxes," and "legislative appropriations." Funds distributed by the state are categorized by (1) general purpose flat grant, (2) general purpose equalizing grant, (3) special purpose flat grant, and (4) special purpose equalizing grant. Additional information on local and intermediate district financing, including property assessment and tax limitations, debt management, budgeting and audit is also provided.

Revenue Allocation

Table 14 summarizes the percent of state-local revenue by governmental sources from the most recent Office of Education analysis for the five states under study.[1]

Appendix - Table 14

Percent of non-federal school revenue
by governmental source for five states, 1957-58

State	From Property Tax State	 Intermediate	 Local	From Other Sources State	 Intermediate	 Local
Washington	.1%	0 %	19.9%	51.9%	2.6%	25.5%
California	0	.8	57.8	40.4	0	1.0
New Jersey	0	.6	71.4	26.6	0	1.4
Wisconsin	0	2.8	75.4	21.8	0	0
Nebraska	2.0	10.1	79.2	5.1	1.1	2.5

This basis for categorizing revenues shows the distribution of state-local revenues by level of government collecting the revenue. However, for the person seeking insights into the allocation process, this basis is not useful for analyzing the locus of decision-making on allocation of resources for public education. For instance, funds categorized in the above table as intermediate district revenues include amounts not voluntarily determined by the intermediate district, but mandated by the legislature. Similarly, taxes classed as local revenues include the yield of state-mandated local levies and mandatory sum-sufficient tuition levies over which local units have little or no discretion. In both instances the state legislature makes the decision on resource allocation. For the purposes of analyzing the process of resource allocation, therefore, a more useful set of categories can be developed on the basis of locus of decision-making power.[2] Such a system of categorization would provide a separate category for funds allocated by constitutional mandate.[3]

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[1] U. S. Office of Education, Public School Finance Programs of the United States 1957-58 (Washington: Department of Health, Education and Welfare, 1960). State appropriations for department of education and for state contributions to teachers' retirement are included under "state."

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[2] Renshaw, (op. cit.) in using some of the author's early estimates of the yield of mandated levies, concluded that mandated local revenue is a close substitute for state aid, that in studies of the expenditure effects of state aid the two items could probably be combined without loss of information, and that increasing mandates might be as effective a way to increase total expenditures for education as increasing direct aid.

[3] The constitutional mandate is not uncommon, and for school finance, usually deals with allocating income from school lands or permanent school funds. Most of the allocations have become relatively unimportant in the total school revenue picture. In a few states, however, notably California and Michigan, when rural-urban conflicts are complicated by extreme under-representation of the urban areas, substantial allocations of resources for education were made by constitutional amendment. This procedure at best is a substitute for sound representative government, and is generally disapproved in political theory, but in the two states mentioned it has provided solution to a school problem when the underlying problem of reapportionment of representation in the legislature is still unsolved.

An effort to estimate the effects of a categorization of 1957-58 revenues shown in Table 14 on the basis of locus of decision-making power is presented in Table 15. The intermediate category disappears, because in these five states all collections for schools (except appropriations for support of the county superintendent's office not included in the U. S. Office estimates) are mandated by the legislature. All permanent school funds income is transferred to the constitutional mandate column, and so too is the major portion of California's state appropriations. All tuition and transportation costs paid by one district to another district, as well as tuition levied by the county, are categorized as state-mandated revenues, and so are the yields of the mandated levies. It should be noted that the mandated levies are probably overstated for Nebraska, where the state mandate is not explicit (see discussion in Appendix A, p. 109), and may be overstated in Washington, California, and New Jersey, where no sanctions, or relatively minor sanctions, are imposed by the state on districts failing to make the mandated levies.

Appendix - Table 15

Estimated percent of non-federal revenue for public schools by locus of decision on allocation in five states, 1957-58

		Legislature			
State	Constitution	Appropriation	Earmarked Taxes	Mandated Levies	Local
Washington	1%	49%	3%	16%	32%
California	35	6	0	25	34
New Jersey	1	15	10*	36	37
Wisconsin	2	17	5	42	34
Nebraska	4	2	1	69	24

* New Jersey State Department of Education officials disagree with the U. S. Office of Education's classification of certain gasoline taxes and corporate license taxes as earmarked taxes, and believe they should be shown as appropriations.

The remarkable shift in percentages of revenues classified as local from Appendix Table 1 to Appendix Table 2 is the most striking feature of this comparison. As noted above, mandated levies are probably overstated for Nebraska, and if adjusted to the realities of statewide expectations, the local percent might rise to approach or exceed those of the other four states, which cluster in the small range from 32% to 37%. This table suggests that in these five states perhaps as little as a third of the allocations for public schools is subject to decisions at the local level, and that two-thirds of the revenues are allocated through state and other mechanisms. Furthermore, a preliminary check of the historical development of support systems in several of these states (a tedious and extensive task to be extended and verified in the second phase of our continuing study) suggests that this relationship is stable and has persisted over long periods, with the important shifts in revenue sources occurring between state aid and mandated levies.

Totalling the allocations made through state voting mechanisms and dividing by 1957-58 ADA produces the following estimates of per pupil allocation available (although not necessarily used) to education in these five states.

Appendix - Table 16

Estimated allocations per pupil through state and local voting mechanisms in five states, 1957-58.

State	Allocation per Pupil State Voting Mechanism	Local Allocations Per Pupil	Total State-Local Allocation Per Pupil
Washington	$ 403	$ 189	$ 592
California	344	176	520
New Jersey	306	180	486
Wisconsin	270	141	411
Nebraska	217	67	284

Again the caveat is noted: we probably over estimate Nebraska's state allocation through the property tax, and local allocations are thereby understated. Furthermore, mandates are not enforced with uniform rigor. If Nebraska's local allocation were higher (as it probably is in actuality) so that it approached Wisconsin's, the local allocations would vary remarkably little.

The order is consistent on state and local scales. This suggests that voting mechanisms at both levels are consistent in balancing out expectations for educational services against willingness to allocate available resources to these services. Furthermore, any assumption that failure of the voting mechanism at one level is compensated for by larger allocations at the other level gets little support from these data. Note that California voters, balked in efforts to raise state allocations through the legislature, simply issued a mandate to the legislature through constitutional amendment.

The foregoing analysis suggests that the U. S. Office of Education could make an important contribution to the analysis of expenditure effects of state support if a systematic gathering of data on yield of mandated levies were begun.

State Revenue Distribution

Appendix Table 17 summarizes the U. S. Office of Education's categories for state funds distributed to local districts, showing percent of total state funds distributed on each basis. (Note that departmental and retirement appropriations included above are excluded in this and following tables.)

Appendix - Table 17

Percent of total state funds by type of grant in five states, 1957-58[4]

State	Gen. Purpose Flat Grant	Gen. Purpose Equal. Grant	Spec. Purpose Flat Grant	Spec. Purpose Equal. Grant
Washington	61.3%	20.3%	1.4%	17.0%
California	64.2	28.0	5.8	2.0
New Jersey	51.5	21.5	10.9	16.1
Wisconsin	49.6	33.0	17.3	.1
Nebraska	83.1	0	16.9	0

Because of the wide variations in amounts involved, Appendix Table 18 was prepared to compare amounts per pupil distributed on each basis.

Appendix - Table 18

Amount of state funds per pupil by type of grant in five states, 1957-58[5]

State	Total	Gen. Purpose Flat Grant	Gen. Purpose Equal. Grant	Spec. Purpose Flat Grant	Spec. Purpose Equal. Grant
Washington	$ 291	$ 178.25	$ 59.15	$ 4.03	$ 49.31
California	193	123.91	54.01	11.28	3.88
New Jersey	101	52.20	21.70	10.98	16.27
Wisconsin	70	34.65	23.10	12.11	.04
Nebraska	16	13.40	0	2.74	0

The size of the flat grants follow the order of the states on total state support. The equalizing grants are relatively small when measured on a per pupil basis.

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[4] *Public School Finance Programs.*

[5] Adapted from *ibid.* Because 1957-58 ADA is used, flat grants may differ from amounts actually distributed, since the actual distribution was based on other statistics or was based on the ADA of the previous year. However, for purposes of the comparison made here, the differences are negligible. See Appendix A for discussion of ADA and problems involved in using it for interstate comparisons.

To obtain a better understanding of the relative importance of the state grants, something needs to be known of their incidence. One approach to analyzing their incidence is to establish the ranges of state aid payments per pupil in the several states. Appendix Table 19 presents this information for the selected districts in the five states under study for 1958-59.

Appendix - Table 19

Variations in state aid per pupil among selected districts of five states, 1958-59

	State Aid Per Pupil				
State	Low	High	Range	Mean	S. D.
Washington	$179	$299	$120	$250	$25
California	127	245	118	169	33
New Jersey	52	140	88	74	21
Wisconsin	35	191	136	59	41
Nebraska	10	20	10	14	3

Wisconsin appears to have the most flexible state support program. The possible range is much greater than shown by data for the districts selected, first because no funds are paid to districts failing to make the state-mandated levy on local property, and second because the Wisconsin foundation program has no fixed maximum - the state supports an education program regardless of cost, and state equalization payments have run to above $700 per pupil in some districts not included in this study (largely due to costs inflated by sparsity factors). The definition of a program to be supported, with recognition that costs may vary widely from community to community, is a unique feature in the Wisconsin school support plan.

The other three states having foundation programs define the program in dollar amounts.[6] Nebraska has no foundation program.

Appendix Table 20 shows the means for total expenditures per pupil in ADA and for the state-local components of the total.

Appendix - Table 20

Means for total, state and local expenditures per pupil in selected districts from five states 1958-59

State	Mean Expenditure Per Pupil					
	Total Current Expense	State Aid	Local			Partnership
			Total	Mandated	Voluntary	
Washington	378	250	81	68	14	312
California	406	169	214	108	110	278
New Jersey	435	74	343	161	184	232
Wisconsin	394	59	286	153	134	211
Nebraska	269	14	219	91	128	105

Note: State and total local expenditures, or mandated, voluntary and state expenditures, or partnership and voluntary expenditures, do not add to the total. If the local mandated, voluntary and state expenditures, are subtracted from the total, the residuals are: Washington - 46, California - 19, New Jersey - 16, Wisconsin - 48, and Nebraska - 36. There are four sources for these residuals: (1) federal aid is not included; (2) minor errors occur due to rounding; (3) local expenditures are calculated on the basis of the number of resident pupils in ADA, whereas the total expenditures are given in terms of the total number of pupils in ADA, and (4) tuition payments are not included in the local expenditures.

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[6] See Public School Finance Programs for description of state equalization aid formulae.

APPENDIX D

Some Notes on the Total Allocation for State and Local Government Services

This appendix reports some evidences of the total impact of the cost of governmental services in the five states under study. A general appraisal of the tax systems of the five states was beyond our resources; on the other hand, we recognized that the support of schools cannot be studied adequately except in the context of the support of other governmental services. Consequently, we include here some general information on the total state-local fiscal relationship in these five states at state and local levels. Data for 1957 are used in this section, in order to take advantage of the rich resources provided by the Bureau of Census 1957 Census of Governments.

The Total Burden of State-Local Taxes

Two common measures of the total impact of state-local taxes are the state-local tax revenue per capita and per $1,000 of personal income payments. Table 21 shows this information for the five states, and the mean for 48 states.

Appendix - Table 21

State and local tax revenue per capita and per $1,000 of personal income in five states, 1957[1]

	State and Local Tax Revenue			
	Per Capita		Per $1,000 Income	
State	Amount	Rank among 48 states	Amount	Rank Among 48 States
Washington	$189	9	$ 89	24
California	239	1	94	14
New Jersey	176	15	70	44
Wisconsin	184	11	96	12
Nebraska	140	35	76	37
U.S. Mean	169	--	83	--

All the states except Nebraska are above the national mean on per capita state and local tax revenue. New Jersey and Nebraska are both below the national mean on tax revenues per $1,000 of income and both carry lighter tax burdens as measured on either scale than do the other three states. On the per capita scale California carries the heaviest burden, with Washington next, and Wisconsin third. When compared on the basis of income, however, Wisconsin carries the heaviest burdens, with California second and Washington third.

Another view of tax burdens can be obtained by examining the relationship of the total state-local tax bill to the three principal sources of tax revenue: wealth, income, and consumption. Table 22 presents these data, using as the bases (1) for wealth, estimates of market value of taxable property,[2] (2) for income, personal income payments,[3] and (3) for consumption, retail sales,[4] with the percentages of each represented by the total of state-local taxes in 1957.

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[1] U. S. Department of Commerce, 1957 Census of Governments, Compendium of State Finances, Vol. III, No. 5, Table 26, p. 36, and Table 43, p. 61.

Appendix - Table 22

Total state-local taxes as a percent of wealth, income, and consumption in five states, 1957[5]

State	Total State Taxes		Percent
	Percent of Estimated Value of Taxable Property	Percent of Personal Income Payments	of Retail Sales
Washington	4.5	8.9	15.0
California	3.9	9.4	16.6
New Jersey	4.3	7.0	13.6
Wisconsin	4.8	9.6	15.9
Nebraska	2.8	7.6	11.6
National Mean	4.2	8.3	14.4

From this viewpoint Wisconsin appears to carry the heaviest tax burden. California and Washington rank second and third, close together but probably in that order. Again, when viewed in this way, New Jersey and Nebraska clearly carry lighter tax loads than the other three states in the group.

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[2] Estimated Value of Taxable Property, Taxable Property Values In The United States, Vol V of the 1957 Census of Governments, Table 12, p.81.

[3] Personal Income Payments, Compendium of Government Finances, Vol. III, No. 5, Table 43, p. 62.

[4] Retail sales data are for 1958, from the Statistical Abstract, 1960, Table 1134, p. 834.

[5] The total of state and local taxes, Compendium of Government Finances, Vol. III, No. 5, Table 23, p. 33.

The rank differences on the three scales are interesting because they probably reflect some profound differences in the economies of the five states. For instance, the ratio of equalized valuation of taxable property to income in Nebraska is about .37. Thus a dollar in taxable property is associated in that state with 37 cents in income. In New Jersey, on the other hand, where productivity probably reflects technological arrangements of a higher order of complexity, the ratio is .61 and a dollar in taxable property is associated with personal income payments of 61 cents. Therefore an expression of tax burdens in terms of property-tax rates will probably overstate the burden in New Jersey and understate it in Nebraska.

The Sources of Revenue

Another way of viewing the impact of state-local taxes is to determine how taxes actually levied on each base are related to the total base.

Table 23 shows the total tax revenues of the five states grouped in five tax categories, with percent of the total tax revenue drawn from each shown.

Appendix - Table 23

Percent of total tax revenue of state and local governments by tax source in five states, 1957

State	Property	Sales	Income		Other
			Personal	Corporate	
Washington	29.6	60.7	0	0	9.7
California	47.2	36.2	4.3	5.1	7.2
New Jersey	64.0	22.7	0	0	13.3
Wisconsin	51.8	15.4	15.6	7.8	9.4
Nebraska	69.9	20.6	0	0	9.5

Derived from Compendium of Government Finances, Vol. III, No. 5, Table 21, p. 29.

Nebraska and New Jersey evidently depend most heavily on the property tax, and in view of the disparate economies noted above, probably with quite different economic effects. With the high level of manufacturing in New Jersey, it seems probable that the high property tax level may have much the same effect as a corporate income tax on the manufacturing sector of the economy, particularly in view of known tendencies in the larger industrial complexes at least, to assess corporate properties at a higher rate in New Jersey. Washington depends most heavily on sales and gross receipts taxes, and provides some evidence that this form of taxation is most readily tolerated at fairly high levels by taxpayers. Corporate income and other taxes are of relatively minor importance in all these states.

Table 24 sets forth the load on the three major sources of revenue in the five states, showing taxes drawn from each source as a percent of the total value of the base. Corporate income and other taxes are not treated because of the difficulty of identifying the base.

Appendix - Table 24

1957 tax collections in five states shown as a percent of the base from which they were drawn*

State	Property Taxes as Percent of Estimated Full Value of Property	Percent Sales Taxes as Percent of Retail Sales	Income Taxes As Percent Of Personal Income Payments
Washington	1.3	5.4	0
California	1.8	3.4	.7
New Jersey	2.7	1.6	0
Wisconsin	2.5	1.5	2.5
Nebraska	2.0	1.6	0

* Retail sales data for 1958 were used because 1957 data were not available. Sources are the same as for Appendix Table 22.

The total state-local tax burden on property is more than twice as great in New Jersey as it is in Washington. Washington's taxes on consumption, on the other hand, are more than three times as great as New Jersey's, Wisconsin's, and Nebraska's. Only two of these states tax income. The Wisconsin rate on personal income is more than three times the rate employed by California.[6]

Consideration of state and local tax loads in these five states without reference to the federal tax load obscures some additional complex interrelationships. Federal taxes per capita in these states are estimated as follows:[7/] California ($441, New Jersey ($403), Wisconsin ($357), Nebraska ($344), and Washington ($340).

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[6] In a letter to the author, Jesse Burkhead, Professor of Economics at Syracuse University, made the following perceptive comment. His caveat is heartily endorsed by the author, who is also a former resident of Wisconsin:

". . . I am always concerned about conclusions that may be drawn from taxes and their burdens in relation to state income or any other index. Perhaps this stems from the fact that I was a one-time resident of Wisconsin and that Wisconsin always comes out badly in such comparisons. The major point is that such analysis always suggests that taxes and tax burdens can be viewed in isolation from the benefits of public expenditures. It may well be that the economic prosperity and welfare of Wisconsin is as great as it is because of a fairly large public sector. The relatively large outlays for higher education in Wisconsin, for example, may generate not only larger incomes for the residents of the state but make it an attractive state in which to live and work. In any event, the fact that taxes and corresponding public expenditures are higher in Wisconsin than other states may simply reflect a different preference pattern as between public and private goods, a preference pattern that may be quite rational and certainly one which should not be discouraged.

Also, underlying any such analysis is the implicit assumption that personal income or property or retail sales are, in fact, indices of taxable capacity. At best, they are proxy values that may be an indication of taxable capacity. I have become convinced recently that the concept of state taxable capacity or local capacity is a very slippery one indeed, and should not be used without accompanying caveats."

Undoubtedly the incidence of this largest of all allocations to governmental services has some effect on the allocations at state and local levels. It should be noted that in the total matrix of all tax relationships, the states with higher levels of state and local taxes enjoy an advantage over states with lower levels, in that a substantial portion of the revenues obtained from state and local taxes (perhaps as much as a third) is revenue that would otherwise flow into the federal tax system, because deductions for state and local taxes paid reduces federal taxes payable.

[7/] Per capita estimates of the federal tax burden were obtained from the grand total of receipts reported by states by the Internal Revenue Service (in Combined Statement of Receipts, Expenditures and Balances of the United States Government for the fiscal year ended June 30, 1959, U. S. Treasury Dept. Table Q, pp. 108-9) by dividing the receipts by the 1960 U.S. population reported by the Census Bureau. Again, complex interrelationships are involved, and the Treasury report appends the following caveat in a footnote to Table Q:
"Federal tax receipts in the various states do not necessarily indicate the tax burden of the respective states, since the taxes may be eventually borne by persons in other states. Therefore, data representing tax collections in particular states have very serious limitations and, in the interest of accuracy, great care must be exercised in their use. Receipts from internal revenue collected in a particular state, for example, do not necessarily correspond with the amounts which the people of that state ultimately pay toward the expenses of the government. While the individual reporting income in a certain state is usually a resident of that state, his income is often derived from sources in another state. Also, corporations, particularly the larger ones, pay their income taxes in the states in which their principal offices are maintained, although their physical properties may be located in other states or sections of the country and the greater part of their profits may be derived from sales in many states. In the case of the large amounts of collections of excise taxes on tobacco and automobiles, to what extent, if any, this revenue may be said to pertain to a particular state is a matter of some doubt since the source is the tax laid on the sales of tobacco and automobiles throughout the country. Thus the revenue is derived from the taxpaying purchasers at retail in the country-not the business enterprises of the particular state.